```
NNN         NNN  MMM         MMM  LLL
NNN         NNN  MMM         MMM  LLL
NNN         NNN  MMM         MMM  LLL
NNN         NNN  MMMMMM   MMMMMM  LLL
NNN         NNN  MMMMMM   MMMMMM  LLL
NNN         NNN  MMMMMM   MMMMMM  LLL
NNNNNN      NNN  MMM   MMM   MMM  LLL
NNNNNN      NNN  MMM   MMM   MMM  LLL
NNNNNN      NNN  MMM   MMM   MMM  LLL
NNN   NNN   NNN  MMM         MMM  LLL
NNN   NNN   NNN  MMM         MMM  LLL
NNN   NNN   NNN  MMM         MMM  LLL
NNN      NNNNNN  MMM         MMM  LLL
NNN      NNNNNN  MMM         MMM  LLL
NNN      NNNNNN  MMM         MMM  LLL
NNN         NNN  MMM         MMM  LLL
NNN         NNN  MMM         MMM  LLL
NNN         NNN  MMM         MMM  LLL
NNN         NNN  MMM         MMM  LLLLLLLLLLLLLLL
NNN         NNN  MMM         MMM  LLLLLLLLLLLLLLL
NNN         NNN  MMM         MMM  LLLLLLLLLLLLLLL
```

```
_$

Ps
--
NP

NP



$G


$O










NP

PA

_L
```

```
                                                C  2
**FILE**ID**NMLBLDMSG






        NN      NN  MM      MM  LL          BBBBBBBB    LL          DDDDDDDD    MM      MM    SSSSSSSS    GGGGGGGG
        NN      NN  MM      MM  LL          BBBBBBBB    LL          DDDDDDDD    MM      MM    SSSSSSSS    GGGGGGGG
        NN      NN  MMMM  MMMM  LL          BB      BB  LL          DD      DD  MMMM  MMMM  SS          GG
        NN      NN  MMMM  MMMM  LL          BB      BB  LL          DD      DD  MMMM  MMMM  SS          GG
        NNNN    NN  MM  MM  MM  LL          BB      BB  LL          DD      DD  MM  MM  MM  SS          GG
        NNNN    NN  MM  MM  MM  LL          BB      BB  LL          DD      DD  MM  MM  MM  SS          GG
        NN  NN  NN  MM      MM  LL          BBBBBBBB    LL          DD      DD  MM      MM    SSSSSS    GG
        NN  NN  NN  MM      MM  LL          BBBBBBBB    LL          DD      DD  MM      MM    SSSSSS    GG
        NN    NNNN  MM      MM  LL          BB      BB  LL          DD      DD  MM      MM          SS  GG  GGGGGG
        NN    NNNN  MM      MM  LL          BB      BB  LL          DD      DD  MM      MM          SS  GG  GGGGGG
        NN      NN  MM      MM  LL          BB      BB  LL          DD      DD  MM      MM          SS  GG      GG    ....
        NN      NN  MM      MM  LL          BB      BB  LL          DD      DD  MM      MM          SS  GG      GG    ....
        NN      NN  MM      MM  LLLLLLLLLL  BBBBBBBB    LLLLLLLLLL  DDDDDDDD    MM      MM  SSSSSSSS      GGGGGG      ....
        NN      NN  MM      MM  LLLLLLLLLL  BBBBBBBB    LLLLLLLLLL  DDDDDDDD    MM      MM  SSSSSSSS      GGGGGG      ....


        LL          IIIIII      SSSSSSSS
        LL          IIIIII      SSSSSSSS
        LL            II      SS
        LL            II      SS
        LL            II      SS
        LL            II      SS
        LL            II        SSSSSS
        LL            II        SSSSSS
        LL            II              SS
        LL            II              SS
        LL            II              SS
        LL            II              SS
        LLLLLLLLLL  IIIIII    SSSSSSSS
        LLLLLLLLLL  IIIIII    SSSSSSSS
```

```
0001  0 %TITLE 'NML Network message builder module'
0002  0 MODULE NML$BLDMSG (
0003  0                 LANGUAGE (BLISS32),
0004  0                 ADDRESSING_MODE (NONEXTERNAL=GENERAL),
0005  0                 ADDRESSING_MODE (EXTERNAL=GENERAL),
0006  0                 IDENT = 'V04-000'
0007  0                 ) =
0008  1 BEGIN
0009  1 !
0010  1 !****************************************************************************
0011  1 !*                                                                          *
0012  1 !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                 *
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0028  1 !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                 *
0029  1 !*                                                                          *
0030  1 !*                                                                          *
0031  1 !****************************************************************************
0032  1 !
0033  1
0034  1 !++
0035  1 ! FACILITY:  DECnet-VAX Network Management Listener
0036  1 !
0037  1 !
0038  1 ! ABSTRACT:
0039  1 !
0040  1 !       This module contains routines to build NICE response messages
0041  1 !       and miscellaneous routines for debugging.
0042  1 !
0043  1 ! ENVIRONMENT:  VAX/VMS Operating System
0044  1 !
0045  1 ! AUTHOR:  Distributed Systems Software Engineering
0046  1 !
0047  1 ! CREATION DATE:  28-Jan-1980
0048  1 !
0049  1 ! MODIFIED BY:
0050  1 !
0051  1 !       V03-012 MKP0012         Kathy Perko             2-Jan-1984
0052  1 !               Convert from old $TRNLOG system service to new $TRNLNM
0053  1 !               system service for translating logical names.
0054  1 !
0055  1 !       V03-011 MKP0011         Kathy Perko             4-Aug-1983
0056  1 !               Change format of node permanent database to use multiple ISAM
0057  1 !               keys for better performance.  Also, give NML a message file.
```

```
;   58         0058   1 !
;   59         0059   1 !            V03-010 MKP0010          Kathy Perko                11-April-1982
;   60         0060   1 !                    Fix response message length for system messages.
;   61         0061   1 !
;   62         0062   1 !            V03-009 MKP0009          Kathy Perko                9-Nov-1982
;   63         0063   1 !                    Add code to log all NICE messages to NML$WATCHER
;   64         0064   1 !                    if the logical name is defined.
;   65         0065   1 !                    Add code to NML logging so that any information that is printed
;   66         0066   1 !                    which is past the end of the buffer is zeros.
;   67         0067   1 !
;   68         0068   1 !            V03-008 MKP0008          Kathy Perko                4-Oct-1982
;   69         0069   1 !                    Add X29 file dump to logging stuff.
;   70         0070   1 !
;   71         0071   1 !            V03-007 MKP0007          Kathy Perko                13-July-1982
;   72         0072   1 !                    Enhance NML$ADDMSGPRM to handle hex image fields.
;   73         0073   1 !
;   74         0074   1 !            V03-006 MKP0006          Kathy Perko                10-Jan-1982
;   75         0075   1 !                    Add a message parameter to NML$DEBUG_QIO so I can label
;   76         0076   1 !                    what kind of QIO is getting logged.
;   77         0077   1 !
;   78         0078   1 !            V03-005 MKP0005          Kathy Perko                20-Dec-1981
;   79         0079   1 !                    Change debug logging so that it can handle no NFB descriptor
;   80         0080   1 !                    address.  This allows NML to dump just the QIO status and
;   81         0081   1 !                    IOSB for MOP QIOs.
;   82         0082   1 !
;   83         0083   1 !            V03-004 MKP0004          Kathy Perko                03-Nov-1981
;   84         0084   1 !                    Add support for secondary (RMS) lines of message text in a
;   85         0085   1 !                    NICE reply message.
;   86         0086   1 !
;   87         0087   1 !            V03-003 MKP0003          Kathy Perko                20-Sept-1991
;   88         0088   1 !                    Fix logging so QIO info is dumped.
;   89         0089   1 !
;   90         0090   1 !            V03-002 MKP0002          Kathy Perko                26-July-1981
;   91         0091   1 !                    Enhance logging to dump contents of QIO buffers, and
;   92         0092   1 !                    dump buffers right to left with ASCII on the right.
;   93         0093   1 !
;   94         0094   1 !            V03-001 MKP0001          Kathy Perko                26-July-1981
;   95         0095   1 !                    Fix logging so permanent data base files aren't
;   96         0096   1 !                    opened and closed every time.
;   97         0097   1 !--
;   98         0098   1
;   100      0099  1 %SBTTL 'Declarations'
;   101      0100  1
;   102      0101  1 !
;   103      0102  1 ! TABLE OF CONTENTS:
;   104      0103  1 !
;   105      0104  1
;   106      0105  1 FORWARD ROUTINE
;   107      0106  1     NML$BLD_REPLY,
;   108      0107  1     NML$ADD_MSG_TXT,
;   109      0108  1     NML$ADDMSGPRM,
;   110      0109  1     NML$ADDMSGCOU,
;   111      0110  1     NML$ERROR_1         : NOVALUE,
;   112      0111  1     NML$ERROR_2         : NOVALUE,
;   113      0112  1     NML$DEBUG_TXT       : NOVALUE,
;   114      0113  1     NML$DEBUG_MSG       : NOVALUE,
;   115      0114  1     NML$DEBUG_QIO       : NOVALUE,
;   116      0115  1     NML$DUMP_QIO_BUFS   : NOVALUE,
;   117      0116  1     NML$LOGALLPDB       : NOVALUE,
;   118      0117  1     NML$FILEDMP         : NOVALUE,
;   119      0118  1     NML$LOGFILEOP       : NOVALUE,
;   120      0119  1     NML$LOGRECORDOP     : NOVALUE,
;   121      0120  1     NML$APPENDTXT       : NOVALUE,
;   122      0121  1     NML$TRNLOGNUM;
;   123      0122  1
;   124      0123  1 !
;   125      0124  1 ! INCLUDE FILES:
;   126      0125  1 !
;   127      0126  1
;   128      0127  1 LIBRARY 'LIB$:NMLLIB.L32';
;   129      0128  1 LIBRARY 'SHRLIB$:NMALIBRY.L32';
;   130      0129  1 LIBRARY 'SYS$LIBRARY:STARLET.L32';
;   131      0130  1
;   132      0131  1 !
;   133      0132  1 ! EXTERNAL REFERENCES:
;   134      0133  1 !
;   135      0134  1
;   136      0135  1 $NML_EXTDEF;
;   137      0136  1
;   138      0137  1 EXTERNAL
;   139      0138  1     NML$GQ_PROPRVMSK : BBLOCK [8],      ! Process privilege mask
;   140      0139  1     NML$GW_WATCHER_CHAN: WORD;          ! Channel assigned for NML$WATCHER.
;   141      0140  1
;   142      0141  1 EXTERNAL ROUTINE
;   143      0142  1     LIB$CVT_HTB         : ADDRESSING_MODE (GENERAL),
;   144      0143  1     LIB$PUT_OUTPUT      : ADDRESSING_MODE (GENERAL),
;   145      0144  1     NML$CLOSEFILE,
;   146      0145  1     NMA$OPENFILE,
;   147      0146  1     NMA$READREC;
;   148      0147  1
```

```
1 %SBTTL 'NML$BLD_REPLY  Build NICE response message'
1 GLOBAL ROUTINE NML$BLD_REPLY (MSGBLK, MSGLEN) =
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !       This routine builds a NICE response message based on the
1 !       message segment block.
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !       MSGBLK          Address of the message segment block (MSB).
1 !       MSGLEN          Address of longword to return the total size of
1 !                       the message that was built.
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !       NONE
1 !
1 ! IMPLICIT OUTPUTS:
1 !
1 !       NML$AB_SNDBUFFER contains the NICE reply message built as described in
1 !       the message segment block.
1 !
1 ! ROUTINE VALUE:
1 ! COMPLETION CODES:
1 !
1 !       NONE
1 !
1 ! SIDE EFFECTS:
1 !
1 !       The NICE response message is in NML$AB_SNDBUFFER.
1 !
1 !--
1
2 BEGIN
2
2 MAP
2     msgblk : REF BBLOCK;
2
2 LOCAL
2     bufcnt  : SIGNED,                         ! Message length counter
2     len     : BYTE,                           ! Temporary string length
2     msg_count_ptr,                            ! Error text length pointer
2     in_ptr,                                   ! Input text pointer
2     out_ptr;                                  ! Output message pointer
2 !
2 ! The MSB longword mask determines the message fields that are
2 ! described in the following longwords.  The status code is always
2 ! required.
2 !
2 bufcnt = 0;                                   ! Initialize buffer count
2 out_ptr = nml$ab_sndbuffer;                   ! Get output buffer pointer
2 CH$WCHAR_A (.msgblk [msb$b_code], out_ptr);   ! Add return code
2 bufcnt = .bufcnt + 1;                         ! Increment message count
2 !
2 ! Check for detail field.
```

```
2 !
2 IF .msgblk [msb$v_det_fld] THEN
3     BEGIN
3     !
3     ! Move the detail word into the message buffer.
3     !
3     (.out_ptr)<0,16> = .msgblk [msb$w_detail];
3     out_ptr = .out_ptr + 2;
3     END
2 ELSE
3     BEGIN
3     !
3     ! No detail field is specified so add a minus one to the message.
3     !
3     (.out_ptr)<0,16> = -1;
3     out_ptr = .out_ptr + 2;
2     END;
2 bufcnt = .bufcnt + 2;                     ! Add detail length to count
2 !
2 ! Check for message field if there is room in the buffer.
2 !
2 IF .bufcnt LSS nml$k_sndbflen THEN
3     BEGIN
3     !
3     ! Initialize the message length field to zero.  Then save the address
3     ! of the count so, if there's more than one message to add, the count
3     ! field can be incremented.
3     !
3     msg_count_ptr = .out_ptr;
3     CH$WCHAR_A (0, out_ptr);
3     bufcnt = .bufcnt + 1;
3     IF .msgblk [msb$v_msg_fld] THEN
3         out_ptr = nml$add_msg_txt
3                         (.msgblk [msb$l_text],  ! Message code
3                          bufcnt,                ! Bytes left in NCP response msg
3                          .msg_count_ptr,        ! Error msg count pointer
3                          .out_ptr);             ! Message end pointer
3     !
3     ! If a secondary status message is requested, then append a CR/LF and the
3     ! second line of message text to the ASCIC text string in the NICE response.
3     !
3     IF .msgblk [msb$v_msg2_fld] THEN          ! If secondary message supplied,
3         out_ptr = nml$add_msg_txt
3                         (.msgblk [msb$l_text2], ! Message code
3                          bufcnt,                ! Bytes left in NCP response msg
3                          .msg_count_ptr,        ! Error msg count pointer
3                          .out_ptr);             ! Message end pointer
2     END;
2 !
2 ! If there is room in the buffer check for the entity field.
2 !
2 IF .bufcnt LSS nml$k_sndbflen THEN
3     BEGIN
3     IF .msgblk [msb$v_entd_fld]
3     AND (.msgblk [msb$a_entity] NEQA 0) THEN
4         BEGIN
4         !
```

```
4          ! Entity field is ASCID string.
4          !
4          BIND
4              ent_dsc = msgblk [msb$a_entity] : REF DESCRIPTOR;
4
4          in_ptr = .ent_dsc [dsc$a_pointer]; ! Get entity pointer
4          len = .ent_dsc [dsc$w_length];     ! Get length
4          !
4          ! If message will not fit in the buffer move the maximum.
4          !
4          IF (.bufcnt + .len) GTR nml$k_sndbflen THEN
4              len = nml$k_sndbflen - .bufcnt;
4          !
4          ! Move the count and the entity string into the buffer and add
4          ! the length to the total.
4          !
4          out_ptr = CH$MOVE (.len,
4                                  .in_ptr,
4                                  .out_ptr);
4          bufcnt = .bufcnt + .len;
3          END;
2      END;
2  !
2  ! If there is room in the buffer check for the data field.
2  !
2  IF .bufcnt LSS nml$k_sndbflen THEN
3      BEGIN
3      IF .msgblk [msb$v_data_fld]
3      AND (.msgblk [msb$a_data] NEQA 0) THEN
4          BEGIN
4          !
4          ! Data field is ASCID string.
4          !
4          BIND
4              datadsc = msgblk [msb$a_data] : REF DESCRIPTOR;
4
4          in_ptr = .datadsc [dsc$a_pointer]; ! Get data pointer
4          len = .datadsc [dsc$w_length];     ! Get length
4          !
4          ! If message will not fit in the buffer move the maximum.
4          !
4          IF (.bufcnt + .len) LEQ nml$k_sndbflen THEN
5              BEGIN
5              !
5              ! Move the data string into the buffer and add length to total.
5              !
5              out_ptr = ch$move (.len,
5                                  .in_ptr,
5                                  .out_ptr);
5              bufcnt = .bufcnt + .len;
4              END;
3          END;
2      END;
2  .msglen = .bufcnt;                               ! Return total message size
2  RETURN nml$_sts_suc                              ! Return success
1  END;                                     ! End of NML$BLD_REPLY
```

```
                                                 .TITLE  NML$BLDMSG NML Network message builder module
                                                 .IDENT  \V04-000\

                                                 .EXTRN  NML$GB_EVTSRCTYP
                                                 .EXTRN  NML$GQ_EVTSRCDSC
                                                 .EXTRN  NML$GW_EVTCLASS
                                                 .EXTRN  NML$GB_EVTMSKTYP
                                                 .EXTRN  NML$GQ_EVTMSKDSC
                                                 .EXTRN  NML$GW_EVTSNKADR
                                                 .EXTRN  NML$GW_ACP_CHAN
                                                 .EXTRN  NML$GL_LOGMASK, NML$GQ_ENTSTRDSC
                                                 .EXTRN  NML$AB_QIOBUFFER
                                                 .EXTRN  NML$GQ_QIOBFDSC
                                                 .EXTRN  NML$AB_EXEBUFFER
                                                 .EXTRN  NML$GL_EXEDATPTR
                                                 .EXTRN  NML$GQ_EXEDATDSC
                                                 .EXTRN  NML$GQ_EXEBFDSC
                                                 .EXTRN  NML$AB_RCVBUFFER
                                                 .EXTRN  NML$GQ_RCVBFDSC
                                                 .EXTRN  NML$AB_SNDBUFFER
                                                 .EXTRN  NML$GQ_SNDBFDSC
                                                 .EXTRN  NML$GL_RCVDATLEN
                                                 .EXTRN  NML$AB_CPTABLE, NML$AB_MSGBLOCK
                                                 .EXTRN  NML$AB_ENTITY_ID
                                                 .EXTRN  NML$AB_QUALIFIER_ID
                                                 .EXTRN  NML$AB_ENTITYDATA
                                                 .EXTRN  NML$AB_NML_NMV, NML$AB_PRMSEM
                                                 .EXTRN  NML$AB_RECBUF, NML$AL_ENTINFTAB
                                                 .EXTRN  NML$AL_PERMINFTAB
                                                 .EXTRN  NML$AW_PRM_DES, NML$GB_CMD_VER
                                                 .EXTRN  NML$GB_ENTITY_CODE
                                                 .EXTRN  NML$GB_ENTITY_FORMAT
                                                 .EXTRN  NML$GL_QUALIFIER_PST
                                                 .EXTRN  NML$GB_QUALIFIER_FORMAT
                                                 .EXTRN  NML$GB_FUNCTION
                                                 .EXTRN  NML$GB_INFO, NML$GB_OPTIONS
                                                 .EXTRN  NML$GL_PRMCODE, NML$GL_PRS_FLGS
                                                 .EXTRN  NML$GL_NML_ENTITY
                                                 .EXTRN  NML$GQ_NETNAMDSC
                                                 .EXTRN  NML$GQ_RECBFDSC
                                                 .EXTRN  NML$GW_PRMDESCNT
                                                 .EXTRN  NML$GQ_PROPRVMSK
                                                 .EXTRN  NML$GW_WATCHER_CHAN
                                                 .EXTRN  LIB$CVT_HTB, LIB$PUT_OUTPUT
                                                 .EXTRN  NML$CLOSEFILE, NMA$OPENFILE
                                                 .EXTRN  NMA$READREC

                                                 .PSECT  $CODE$,NOWRT,2

                               03FC 00000        .ENTRY  NML$BLD_REPLY, Save R2,R3,R4,R5,R6,R7,R8,R9 ; 0149
          59 00000000V   00    9E 00002          MOVAB   NML$ADD_MSG_TXT, R9                         ;
                         7E    D4 00009          CLRL    BUFCNT                                      ; 0199
          50 00000000G   00    9E 0000B          MOVAB   NML$AB_SNDBUFFER, OUT_PTR                   ; 0200
          56         04  AC    D0 00012          MOVL    MSGBLK, R6                                  ; 0201
          80         04  A6    90 00016          MOVB    4(R6), (OUT_PTR)+                           ;
                         6E    D6 0001A          INCL    BUFCNT                                      ; 0202
          06        66          01  E1 0001C        BBC     #1, (R6), 1$                            ; 0206
                    60    08    A6  B0 00020        MOVW    8(R6), (OUT_PTR)                        ; 0211
                                03  11 00024        BRB     2$                                      ; 0206
                    60          01  AE 00026  1$:   MNEGW   #1, (OUT_PTR)                           ; 0219
                    50          02  C0 00029  2$:   ADDL2   #2, OUT_PTR                             ; 0212
                    6E          02  C0 0002C        ADDL2   #2, BUFCNT                              ; 0222
    00000200        8F          6E  D1 0002F        CMPL    BUFCNT, #512                            ; 0226
                                29  18 00036        BGEQ    4$                                      ;
                    52          50  D0 00038        MOVL    OUT_PTR, MSG_COUNT_PTR                  ; 0233
                                80  94 0003B        CLRB    (OUT_PTR)+                              ; 0234
                                6E  D6 0003D        INCL    BUFCNT                                  ; 0235
          0D        66          02  E1 0003F        BBC     #2, (R6), 3$                            ; 0236
                                50  DD 00043        PUSHL   OUT_PTR                                 ; 0241
                                52  DD 00045        PUSHL   MSG_COUNT_PTR                           ; 0240
                          08    AE  9F 00047        PUSHAB  BUFCNT                                  ; 0238
                          0C    A6  DD 0004A        PUSHL   12(R6)                                  ;
                    69          04  FB 0004D        CALLS   #4, NML$ADD_MSG_TXT                     ;
          0D        66          03  E1 00050  3$:   BBC     #3, (R6), 4$                            ; 0246
                                50  DD 00054        PUSHL   OUT_PTR                                 ; 0251
                                52  DD 00056        PUSHL   MSG_COUNT_PTR                           ; 0250
                          08    AE  9F 00058        PUSHAB  BUFCNT                                  ; 0248
                          10    A6  DD 0005B        PUSHL   16(R6)                                  ;
                    69          04  FB 0005E        CALLS   #4, NML$ADD_MSG_TXT                     ;
    00000200        8F          6E  D1 00061  4$:   CMPL    BUFCNT, #512                            ; 0256
                                37  18 00068        BGEQ    6$                                      ;
          33        66          04  E1 0006A        BBC     #4, (R6), 6$                            ; 0258
                          14    A6  D5 0006E        TSTL    20(R6)                                  ; 0259
                                2E  13 00071        BEQL    6$                                      ;
                    51    14    A6  D0 00073        MOVL    20(R6), R1                              ; 0267
                    58    04    A1  D0 00077        MOVL    4(R1), IN_PTR                           ;
                    57          61  90 0007B        MOVB    (R1), LEN                               ; 0268
                    51          57  9A 0007E        MOVZBL  LEN, R1                                 ; 0272
                    51          6E  C0 00081        ADDL2   BUFCNT, R1                              ;
    00000200        8F          51  D1 00084        CMPL    R1, #512                                ;
                                04  15 0008B        BLEQ    5$                                      ;
          57        00          6E  83 0008D        SUBB3   BUFCNT, #0, LEN                         ; 0273
                    51          57  9A 00091  5$:   MOVZBL  LEN, R1                                 ; 0278
          60        68          51  28 00094        MOVC3   R1, (IN_PTR), (OUT_PTR)                 ; 0280
                    50          53  D0 00098        MOVL    R3, OUT_PTR                             ;
                    51          57  9A 0009B        MOVZBL  LEN, R1                                 ; 0281
                    6E          51  C0 0009E        ADDL2   R1, BUFCNT                              ;
    00000200        8F          6E  D1 000A1  6$:   CMPL    BUFCNT, #512                            ; 0287
                                33  18 000A8        BGEQ    7$                                      ;
          2F        66          05  E1 000AA        BBC     #5, (R6), 7$                            ; 0289
                          18    A6  D5 000AE        TSTL    24(R6)                                  ; 0290
                                2A  13 000B1        BEQL    7$                                      ;
                    51    18    A6  D0 000B3        MOVL    24(R6), R1                              ; 0298
                    58    04    A1  D0 000B7        MOVL    4(R1), IN_PTR                           ;
                    57          61  90 000BB        MOVB    (R1), LEN                               ; 0299
                    51          57  9A 000BE        MOVZBL  LEN, R1                                 ; 0303
                    51          6E  C0 000C1        ADDL2   BUFCNT, R1                              ;
    00000200        8F          51  D1 000C4        CMPL    R1, #512                                ;
                                10  14 000CB        BGTR    7$                                      ;
                    51          57  9A 000CD        MOVZBL  LEN, R1                                 ; 0308
          60        68          51  28 000D0        MOVC3   R1, (IN_PTR), (OUT_PTR)                 ; 0310
                    50          53  D0 000D4        MOVL    R3, OUT_PTR                             ;
                    50          57  9A 000D7        MOVZBL  LEN, R0                                 ; 0311
```

```
                      6E          50  C0 000DA          ADDL2   R0, BUFCNT                                          ;
              08      BC          6E  D0 000DD 7$:      MOVL    BUFCNT, @MSGLEN                                     ; 0315
                      50          01  D0 000E1          MOVL    #1, R0                                              ; 0316
                                      04 000E4          RET                                                         ; 0317

; Routine Size:  229 bytes,    Routine Base:  $CODE$ + 0000
;  321         0318  1 %SBTTL 'NML$ADD_MSG_TXT          Add message text to NCP response'
;  322         0319  1 GLOBAL ROUTINE NML$ADD_MSG_TXT (CODE, NICE_BYTES,
;  323         0320  1                                 MSG_COUNT_PTR, MSG_PTR) =
;  324         0321  1
;  325         0322  1 !++
;  326         0323  1 ! FUNCTIONAL DESCRIPTION:
;  327         0324  1 !        This routine performs a $GETMSG system service to retrieve the
;  328         0325  1 !        NML or system message text for the specified status code.
;  329         0326  1 !
;  330         0327  1 ! FORMAL PARAMETERS:
;  331         0328  1 !
;  332         0329  1 !        CODE            Message error code.
;  333         0330  1 !        NICE_BYTES      Address of bytes in NICE response message so far.
;  334         0331  1 !        MSG_COUNT_PTR   Pointer to message count field (if there's
;  335         0332  1 !                        more than one message, the count field must include
;  336         0333  1 !                        all messages.)
;  337         0334  1 !        MSG_POINTER     Pointer to end of message.
;  338         0335  1 !
;  339         0336  1 ! IMPLICIT OUTPUTS:
;  340         0337  1 !        The message text is added to Error Message field of the NCP
;  341         0338  1 !        response message.
;  342         0339  1 !
;  343         0340  1 !--
;  344         0341  1
;  345         0342  2 BEGIN
;  346         0343  2
;  347         0344  2 OWN
;  348         0345  2     msgbuf : BBLOCK [255];
;  349         0346  2
;  350         0347  2 LOCAL
;  351         0348  2     bufdsc : VECTOR [2],                    ! System message buffer descriptor
;  352         0349  2     reslen : WORD,                          ! Length of text
;  353         0350  2     crlf;
;  354         0351  2
;  355         0352  2 bufdsc [0] = 255;                           ! Initialize buffer descriptor
;  356         0353  2 bufdsc [1] = msgbuf;
;  357         0354  2 !
;  358         0355  2 ! Retrieve the NML or system message text for the specified error code.
;  359         0356  2 !
;  360       P 0357  2 $GETMSG (MSGID  = .code,
;  361       P 0358  2          MSGLEN = reslen,
;  362         0359  2          BUFADR = bufdsc);
;  363         0360  2 !
;  364         0361  2 ! If message will not fit in the buffer move the maximum.  Just in case
;  365         0362  2 ! there is a <CR><LF>, leave room for it.
;  366         0363  2 !
;  367         0364  2 IF (..nice_bytes + .reslen + 2) GTR nml$k_sndbflen THEN
;  368         0365  2     reslen = nml$k_sndbflen - ..nice_bytes - 2;
;  369         0366  2 !
;  370         0367  2 ! If there's already some error text in the message, add a <CR><LF> before
;  371         0368  2 ! adding the second error message.
;  372         0369  2 !
;  373         0370  2 crlf = 0;
;  374         0371  2 IF .msg_count_ptr NEQ (.msg_ptr - 1) THEN
;  375         0372  3     BEGIN
;  376         0373  3     msg_ptr = CH$MOVE (2, UPLIT BYTE(13, 10), .msg_ptr);
;  377         0374  3     crlf = 2;
;   378             0375  2       END;
;   379             0376  2  !
;   380             0377  2  ! Move the error message text into the NCP response message.
;   381             0378  2  !
;   382             0379  2  msg_ptr = CH$MOVE (.reslen, msgbuf, .msg_ptr);
;   383             0380  2  .nice_bytes = ..nice_bytes + .reslen + .crlf;    ! Increment buffer space used
;   384             0381  2  (.msg_count_ptr)<0,8> = .(.msg_count_ptr)<0,8>   ! Increment ASCIC string length
;   385             0382  2                                 + .reslen +.crlf;
;   386             0383  2  RETURN .msg_ptr;
;   387             0384  1  END;                                     ! End of NML$ADD_MSG_TXT


                                                                  .PSECT  $PLIT$,NOWRT,NOEXE,2

                                                0A  0D  00000 P.AAA:  .BYTE   13, 10                                              ;

                                                                  .PSECT  $OWN$,NOEXE,2

                                                      00000 MSGBUF:  .BLKB   255

                                                                  .EXTRN  SYS$GETMSG

                                                                  .PSECT  $CODE$,NOWRT,2

                                              00FC 00000          .ENTRY  NML$ADD_MSG_TXT, Save R2,R3,R4,R5,R6,R7         ; 0319
                      57 00000000'      00   9E 00002          MOVAB   MSGBUF, R7                                          ;
                      5E                0C   C2 00009          SUBL2   #12, SP                                             ;
                04    AE          FF    8F   9A 0000C          MOVZBL  #255, BUFDSC                                        ; 0352
                08    AE                67   9E 00011          MOVAB   MSGBUF, BUFDSC+4                                    ; 0353
                      7E                0F   7D 00015          MOVQ    #15, -(SP)                                          ; 0359
                            0C    AE    9F 00018          PUSHAB  BUFDSC                                              ;
                            0C    AE    9F 0001B          PUSHAB  RESLEN                                              ;
                            04    AC    DD 0001E          PUSHL   CODE                                                ;
          00000000G   00                05   FB 00021          CALLS   #5, SYS$GETMSG                                      ;
                      50                6E   3C 00028          MOVZWL  RESLEN, R0                                          ; 0364
                      50          08    BC   C0 0002B          ADDL2   @NICE_BYTES, R0                                     ;
                      50                02   C0 0002F          ADDL2   #2, R0                                              ;
          00000200    8F                50   D1 00032          CMPL    R0, #512                                            ;
                                        07   15 00039          BLEQ    1$                                                  ;
      6E      01FE    8F          08    BC   A3 0003B          SUBW3   @NICE_BYTES, #510, RESLEN                           ; 0365
                                        56   D4 00042 1$:      CLRL    CRLF                                                ; 0370
      50        10    AC                01   C3 00044          SUBL3   #1, MSG_PTR, R0                                     ; 0371
                      50          0C    AC   D1 00049          CMPL    MSG_COUNT_PTR, R0                                   ;
                                        0F   13 0004D          BEQL    2$                                                  ;
                10    BC 00000000'      00   B0 0004F          MOVW    P.AAA, @MSG_PTR                                     ; 0373
                10    AC                02   C0 00057          ADDL2   #2, MSG_PTR                                         ;
                      56                02   D0 0005B          MOVL    #2, CRLF                                            ; 0374
      10      BC      67                6E   28 0005E 2$:      MOVC3   RESLEN, MSGBUF, @MSG_PTR                            ; 0379
                10    AC                53   D0 00063          MOVL    R3, MSG_PTR                                         ;
                      50                6E   3C 00067          MOVZWL  RESLEN, R0                                          ; 0380
                      50          08    BC   C0 0006A          ADDL2   @NICE_BYTES, R0                                     ;
      08      BC      50                56   C1 0006E          ADDL3   CRLF, R0, @NICE_BYTES                               ;
                      50          0C    BC   9A 00073          MOVZBL  @MSG_COUNT_PTR, R0                                  ; 0382
                      51                6E   3C 00077          MOVZWL  RESLEN, R1                                          ;
                      50                51   C0 0007A          ADDL2   R1, R0                                              ;
      0C      BC      50                56   81 0007D          ADDB3   CRLF, R0, @MSG_COUNT_PTR                            ;
```

```
                          50      10   AC  D0 00082         MOVL    MSG_PTR, R0                                     ; 0383
                                           04 00086         RET                                                     ; 0384

; Routine Size:  135 bytes,    Routine Base:  $CODE$ + 00E5
```

```
1 %SBTTL 'NML$ADDMSGPRM  Add data to NICE response message'
1 GLOBAL ROUTINE NML$ADDMSGPRM (BUFDSC, MSGSIZE, DATAID, DATATYPE, FLDSIZE, FLDADR) =
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !       This routine adds a NICE output parameter to the response message.
1 !       The data id, data type, and the value are added.
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !       BUFDSC          Address of message buffer descriptor.
1 !       MSGSIZE         Address of longword containing current (and
1 !                       resulting message size.
1 !       DATAID          Parameter code (word value).
1 !       DATATYPE        Automatic parsing data type (byte value).
1 !       FLDSIZE         Length of data.
1 !       FLDADR          Address of data string.
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !       NONE
1 !
1 ! IMPLICIT OUTPUTS:
1 !
1 !       Parameter and descriptive information is in buffer described by
1 !       BUFDSC and the longword count pointed to by MSGSIZE is incremented
1 !       by the number of bytes moved.
1 !
1 ! ROUTINE VALUE:
1 ! COMPLETION CODES:
1 !
1 !       If the parameter will not fit in the buffer then an error
1 !       (NML$_STS_SIZ) is returned.  Otherwise, success (NML$_STS_SUC)
1 !       is returned.
1 !
1 ! SIDE EFFECTS:
1 !
1 !       NONE
1 !
1 !--
1
2   BEGIN
2
2   MAP
2       BUFDSC    : REF DESCRIPTOR,
2       DATAID    : WORD,
2       DATATYPE  : BBLOCK [1];
2
2   LOCAL
2       CNT,                            ! Total parameter data byte count
2       PTR;                            ! Output message pointer
2 !
2 ! Data must fit in buffer.
2 !
2   CNT = .FLDSIZE + 3;
2
```

```
;   446         0442  3        IF .CNT GTRU (.BUFDSC [DSC$W_LENGTH] - ..MSGSIZE)
;   447         0443  2        THEN
;   448         0444  2            RETURN NML$_STS_SIZ;
;   449         0445  2    !
;   450         0446  2    ! Move parameter code (id) and data type into buffer.
;   451         0447  2    !
;   452         0448  2        PTR = .BUFDSC [DSC$A_POINTER] + ..MSGSIZE;
;   453         0449  2        (.PTR)<0,16> = .DATAID;
;   454         0450  2        PTR = .PTR + 2;
;   455         0451  2        CH$WCHAR_A (.DATATYPE [0,0,8,0], PTR);
;   456         0452  2    !
;   457         0453  2    ! If parameter value is an image field (ASCII or binary) then move the count
;   458         0454  2    ! into the buffer.
;   459         0455  2    !
;   460         0456  2        IF (NOT .DATATYPE [NMA$V_PTY_COD]) AND        ! Not coded value and
;   461         0457  3          (.DATATYPE [NMA$V_PTY_ASC] OR                ! Ascii or
;   462         0458  3           .DATATYPE [NMA$V_PTY_TYP] EQL NMA$C_PTY_HI) ! hex image
;   463         0459  2        THEN
;   464         0460  3            BEGIN
;   465         0461  3            CH$WCHAR_A (.FLDSIZE, PTR);
;   466         0462  3            CNT = .CNT + 1;
;   467         0463  2            END;
;   468         0464  2    !
;   469         0465  2    ! Move the parameter value into the buffer.
;   470         0466  2    !
;   471         0467  2        CH$MOVE (.FLDSIZE, .FLDADR, .PTR);
;   472         0468  2        .MSGSIZE = ..MSGSIZE + .CNT;
;   473         0469  2
;   474         0470  2        RETURN NML$_STS_SUC
;   475         0471  2
;   476         0472  1        END;                                      ! End of NML$ADDMSGPRM




                                                  007C 00000        .ENTRY  NML$ADDMSGPRM, Save R2,R3,R4,R5,R6               ; 0386
                 56      14  AC            03  C1 00002        ADDL3   #3, FLDSIZE, CNT                                  ; 0440
                             50      04    AC  D0 00007        MOVL    BUFDSC, R0                                        ; 0442
                             51            60  3C 0000B        MOVZWL  (R0), R1                                          ;
                             51      08    BC  C2 0000E        SUBL2   @MSGSIZE, R1                                      ;
                             51            56  D1 00012        CMPL    CNT, R1                                           ;
                                           04  1B 00015        BLEQU   1$                                                ;
                             50            08  CE 00017        MNEGL   #8, R0                                            ; 0444
                                               04 0001A        RET                                                       ;
                 50      04  A0      08    BC  C1 0001B  1$:   ADDL3   @MSGSIZE, 4(R0), PTR                              ; 0448
                             80      0C    AC  B0 00021        MOVW    DATAID, (PTR)+                                    ; 0449
                             80      10    AC  90 00025        MOVB    DATATYPE, (PTR)+                                  ; 0451
                                           13  19 00029        BLSS    3$                                                ; 0456
                 08      10  AC            06  E0 0002B        BBS     #6, DATATYPE, 2$                                  ; 0457
    20      10   AC              0F        00  ED 00030        CMPZV   #0, #15, DATATYPE, #32                            ; 0458
                                           06  12 00036        BNEQ    3$                                                ;
                             80      14    AC  90 00038  2$:   MOVB    FLDSIZE, (PTR)+                                   ; 0461
                                           56  D6 0003C        INCL    CNT                                               ; 0462
                 60      18  BC      14    AC  28 0003E  3$:   MOVC3   FLDSIZE, @FLDADR, (PTR)                           ; 0467
                         08  BC            56  C0 00044        ADDL2   CNT, @MSGSIZE                                     ; 0468
                             50            01  D0 00048        MOVL    #1, R0                                            ; 0470
```

```
                                              04 0004B         RET                                              ; 0472

; Routine Size:  76 bytes,     Routine Base:  $CODE$ + 016C
```

```
1 %SBTTL 'NML$ADDMSGCOU  Add counter data to NICE response message'
1 GLOBAL ROUTINE NML$ADDMSGCOU (BUFDSC, MSGSIZE, FLDSIZE, FLDADR) =
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !       This routine moves the counter parameters into the NICE response
1 !       message.  Since NETACP returns the counters already formatted for
1 !       the NICE message, it is just a matter of moving the string in
1 !       without a parameter type or length.
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !       BUFDSC          Address of message buffer descriptor.
1 !       MSGSIZE         Address of longword containing current (and resulting)
1 !                       message length.
1 !       FLDSIZE         Byte count of counters string.
1 !       FLDADR          Address of counters string.
1 !
1 ! ROUTINE VALUE:
1 ! COMPLETION CODES:
1 !
1 !       If the counters will not fit in the output message buffer then an
1 !       error (NML$_STS_SIZ) is returned.  Otherwise, success (NML$_STS_SUC)
1 !       is returned.
1 !
1 !--
1
2 BEGIN
2
2 MAP
2       BUFDSC : REF DESCRIPTOR;
2
2 LOCAL
2       CNT,                            ! Total counter data length
2       PTR;                            ! Output message pointer
2 !
2 ! Counters string must fit in the buffer.
2 !
2 CNT = .FLDSIZE;
2
3 IF (.CNT + 2) GTRU (.BUFDSC [DSC$W_LENGTH] - ..MSGSIZE)
2 THEN
2       RETURN NML$_STS_SIZ;
2 !
2 ! Move the counters string.
2 !
2 PTR = .BUFDSC [DSC$A_POINTER] + ..MSGSIZE;
2 CH$MOVE (.FLDSIZE, .FLDADR, .PTR);
2 .MSGSIZE = ..MSGSIZE + .CNT;
2
2 RETURN NML$_STS_SUC
2
1 END;                                  ! End of NML$ADDMSGCOU
```

```
                                007C 00000           .ENTRY  NML$ADDMSGCOU, Save R2,R3,R4,R5,R6                ; 0474
                   56      0C   AC   D0 00002           MOVL    FLDSIZE, CNT                                      ; 0512
                   52      02   A6   9E 00006           MOVAB   2(R6), R2                                         ; 0514
                   51      04   AC   D0 0000A           MOVL    BUFDSC, R1                                        ;
                   50           61   3C 0000E           MOVZWL  (R1), R0                                          ;
                   50      08   BC   C2 00011           SUBL2   @MSGSIZE, R0                                      ;
                   50           52   D1 00015           CMPL    R2, R0                                            ;
                                04   1B 00018           BLEQU   1$                                                ;
                   50           08   CE 0001A           MNEGL   #8, R0                                            ; 0516
                                     04 0001D           RET                                                       ;
      50      04   A1      08   BC   C1 0001E 1$:       ADDL3   @MSGSIZE, 4(R1), PTR                              ; 0520
      60      10   BC      0C   AC   28 00024           MOVC3   FLDSIZE, @FLDADR, (PTR)                           ; 0521
              08   BC           56   C0 0002A           ADDL2   CNT, @MSGSIZE                                     ; 0522
                   50           01   D0 0002E           MOVL    #1, R0                                            ; 0524
                                     04 00031           RET                                                       ; 0526

; Routine Size:  50 bytes,    Routine Base:  $CODE$ + 01B8
```

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```
;  533          0527   1 %SBTTL 'NML$ERROR_1  Signal a single byte status message'
;  534          0528   1 GLOBAL ROUTINE NML$ERROR_1 (ERR) : NOVALUE =
;  535          0529   1
;  536          0530   1 !++
;  537          0531   1 ! FUNCTIONAL DESCRIPTION:
;  538          0532   1 !
;  539          0533   1 !       This routine moves an error or status code into the output buffer
;  540          0534   1 !       and sends the message with length of one byte.
;  541          0535   1 !
;  542          0536   1 ! FORMAL PARAMETERS:
;  543          0537   1 !
;  544          0538   1 !       ERR             NICE status code to be transmitted (NMA$C_STS_xxx).
;  545          0539   1 !
;  546          0540   1 ! IMPLICIT INPUTS:
;  547          0541   1 !
;  548          0542   1 !       NONE
;  549          0543   1 !
;  550          0544   1 ! IMPLICIT OUTPUTS:
;  551          0545   1 !
;  552          0546   1 !       NONE
;  553          0547   1 ! -
;  554          0548   1 ! ROUTINE VALUE:
;  555          0549   1 ! COMPLETION CODES:
;  556          0550   1 !
;  557          0551   1 !       NONE
;  558          0552   1 !
;  559          0553   1 ! SIDE EFFECTS:
;  560          0554   1 !
;  561          0555   1 !       An error message is signalled to be send by the condition handler.
;  562          0556   1 !
;  563          0557   1 !--
;  564          0558   1
;  565          0559   2     BEGIN
;  566          0560   2
;  567          0561   2     (NML$AB_SNDBUFFER)<0,8> = .ERR;        ! Move status code into buffer
;  568          0562   2
;  569          0563   2     $SIGNAL_MSG (NML$AB_SNDBUFFER, 1);  ! Signal status message
;  570          0564   2
;  571          0565   1     END;                                  ! End of NML$ERROR_1





                                       0004 00000           .ENTRY  NML$ERROR_1, Save R2                                ; 0528
                     52 00000000G  00    9E 00002           MOVAB   NML$AB_SNDBUFFER, R2                                ;
                     62         04  AC   90 00009           MOVB    ERR, NML$AB_SNDBUFFER                               ; 0561
                                    01   DD 0000D           PUSHL   #1                                                  ; 0563
                                    52   DD 0000F           PUSHL   R2                                                  ;
                          01F90000  8F   DD 00011           PUSHL   #33095680                                           ;
                 00000000G  00      03   FB 00017           CALLS   #3, LIB$SIGNAL                                      ;
                                         04 0001E           RET                                                         ; 0565

; Routine Size:  31 bytes,    Routine Base:  $CODE$ + 01EA
;  573          0566  1 %SBTTL 'NML$ERROR_2  Signal an error message with detail field'
;  574          0567  1 GLOBAL ROUTINE NML$ERROR_2 (ERR, DET) : NOVALUE =
;  575          0568  1
;  576          0569  1 !++
;  577          0570  1 ! FUNCTIONAL DESCRIPTION:
;  578          0571  1 !
;  579          0572  1 !       This routine moves an error or status code into the output buffer
;  580          0573  1 !       followed by the detail word.
;  581          0574  1 !
;  582          0575  1 ! FORMAL PARAMETERS:
;  583          0576  1 !
;  584          0577  1 !       ERR             NICE status code to be transmitted (NMA$C_STS_xxx).
;  585          0578  1 !       DET             NICE error detail code.
;  586          0579  1 !
;  587          0580  1 ! IMPLICIT INPUTS:
;  588          0581  1 !
;  589          0582  1 !       NONE
;  590          0583  1 !
;  591          0584  1 ! IMPLICIT OUTPUTS:
;  592          0585  1 !
;  593          0586  1 !       NONE
;  594          0587  1 !
;  595          0588  1 ! ROUTINE VALUE:
;  596          0589  1 ! COMPLETION CODES:
;  597          0590  1 !
;  598          0591  1 !       NONE
;  599          0592  1 !
;  600          0593  1 ! SIDE EFFECTS:
;  601          0594  1 !
;  602          0595  1 !       An error message is signalled to be sent by the condition handler.
;  603          0596  1 !
;  604          0597  1 !--
;  605          0598  1
;  606          0599  2     BEGIN
;  607          0600  2 !
;  608          0601  2 ! Move the error code and the detail code into the buffer.
;  609          0602  2 !
;  610          0603  2     (NML$AB_SNDBUFFER)<0,8> = .ERR;
;  611          0604  2     (NML$AB_SNDBUFFER + 1)<0,16> = .DET;
;  612          0605  2 !
;  613          0606  2 ! Signal the message.
;  614          0607  2 !
;  615          0608  2     $SIGNAL_MSG (NML$AB_SNDBUFFER, 3);
;  616          0609  2
;  617          0610  1     END;                                 ! End of NML$ERROR_2





                                    0004 00000          .ENTRY  NML$ERROR_2, Save R2                         ; 0567
                 52 00000000G   00   9E 00002          MOVAB   NML$AB_SNDBUFFER, R2                         ;
                 62        04   AC   90 00009          MOVB    ERR, NML$AB_SNDBUFFER                        ; 0603
            01   A2        08   AC   B0 0000D          MOVW    DET, NML$AB_SNDBUFFER+1                      ; 0604
                                03   DD 00012          PUSHL   #3                                           ; 0608
                                52   DD 00014          PUSHL   R2                                           ;
                    01F90000    8F   DD 00016          PUSHL   #33095680                                    ;
```

```
                         00000000G  00            03  FB 0001C          CALLS   #3, LIB$SIGNAL                                  ;
                                                      04 00023          RET                                                     ; 0610

; Routine Size:  36 bytes,    Routine Base:  $CODE$ + 0209
;   619        0611   1 %SBTTL 'NML$DEBUG_TXT  Print text message'
;   620        0612   1 GLOBAL ROUTINE NML$DEBUG_TXT (BITNUM, TXTDSC) : NOVALUE =
;   621        0613   1
;   622        0614   1 !++
;   623        0615   1 ! FUNCTIONAL DESCRIPTION:
;   624        0616   1 !
;   625        0617   1 !       This routine prints the specified message text to SYS$OUTPUT if
;   626        0618   1 !       the appropriate logging flags are set.
;   627        0619   1 !
;   628        0620   1 ! FORMAL PARAMETERS:
;   629        0621   1 !
;   630        0622   1 !       BITNUM          Bit number of the logging flag.
;   631        0623   1 !       TXTDSC          Descriptor of ASCII text string.
;   632        0624   1 !
;   633        0625   1 ! IMPLICIT INPUTS:
;   634        0626   1 !
;   635        0627   1 !       NML$GL_LOGMASK  Values of current logging flags.
;   636        0628   1 !
;   637        0629   1 !--
;   638        0630   1
;   639        0631   2 BEGIN
;   640        0632   2
;   641        0633   2 MAP
;   642        0634   2     TXTDSC : REF DESCRIPTOR;
;   643        0635   2
;   644        0636   2 LITERAL
;   645        0637   2     FAOSIZE = 132;
;   646        0638   2
;   647        0639   2 LOCAL
;   648        0640   2     FAOPRM,
;   649        0641   2     OUTDSC : VECTOR [2],
;   650        0642   2     FAOBUF : BBLOCK [FAOSIZE];
;   651        0643   2
;   652        0644   2 !
;   653        0645   2 ! If the correct logging flag is set then output the text string.
;   654        0646   2 !
;   655        0647   2 IF .NML$GL_LOGMASK [.BITNUM]
;   656        0648   2 THEN
;   657        0649   3     BEGIN
;   658        0650   3     FAOPRM  = .TXTDSC;
;   659        0651   3     OUTDSC [0] = FAOSIZE;
;   660        0652   3     OUTDSC [1] = FAOBUF;
;   661      P 0653   3     $FAOL (CTRSTR = $ASCID ('!/*** !AS'),
;   662      P 0654   3            OUTLEN = OUTDSC [0],
;   663      P 0655   3            OUTBUF = OUTDSC,
;   664        0656   3            PRMLST = FAOPRM);
;   665        0657   3     LIB$PUT_OUTPUT (OUTDSC);
;   666        0658   2     END;
;   667        0659   2
;   668        0660   1 END;                                  ! End of NML$DEBUG_TXT


                                                        .PSECT  $PLIT$,NOWRT,NOEXE,2

          53  41  21  20  2A  2A  2A  2F  21  00002 P.AAC:  .ASCII  \!/*** !AS\                              ;
                                              0000B         .BLKB   1
```

```
                                 00000009  0000C P.AAB:  .LONG    9                                    ;
                                 00000000' 00010         .ADDRESS P.AAC                                ;

                                                         .EXTRN   SYS$FAOL

                                                         .PSECT   $CODE$,NOWRT,2

                                      0000 00000         .ENTRY   NML$DEBUG_TXT, Save nothing          ; 0612
                  5E      FF70    CE   9E 00002         MOVAB    -144(SP), SP                         ;
      2D 00000000G 00       04    AC   E1 00007         BBC      BITNUM, NML$GL_LOGMASK, 1$           ; 0647
                  6E       08    AC   D0 00010         MOVL     TXTDSC, FAOPRM                       ; 0650
            F8    AD       84    8F   9A 00014         MOVZBL   #132, OUTDSC                         ; 0651
            FC    AD       04    AE   9E 00019         MOVAB    FAOBUF, OUTDSC+4                     ; 0652
                                 5E   DD 0001E         PUSHL    SP                                   ; 0656
                           F8    AD   9F 00020         PUSHAB   OUTDSC                               ;
                           F8    AD   9F 00023         PUSHAB   OUTDSC                               ;
                     00000000'   00   9F 00026         PUSHAB   P.AAB                                ;
         00000000G 00            04   FB 0002C         CALLS    #4, SYS$FAOL                         ;
                           F8    AD   9F 00033         PUSHAB   OUTDSC                               ; 0657
         00000000G 00            01   FB 00036         CALLS    #1, LIB$PUT_OUTPUT                   ;
                                      04 0003D 1$:     RET                                           ; 0660

; Routine Size:  62 bytes,    Routine Base:  $CODE$ + 022D
;  670          0661   1 %SBTTL 'NML$DEBUG_MSG  Print binary message'
;  671          0662   1 GLOBAL ROUTINE NML$DEBUG_MSG (BITNUM, BUFFER_ADR,
;  672          0663   1                                    BUFFER_LEN, TXTDSC) : NOVALUE =
;  673          0664   1
;  674          0665   1 !++
;  675          0666   1 ! FUNCTIONAL DESCRIPTION:
;  676          0667   1 !
;  677          0668   1 !       This routine dumps binary messages to SYS$OUTPUT.
;  678          0669   1 !
;  679          0670   1 ! FORMAL PARAMETERS:
;  680          0671   1 !
;  681          0672   1 !       BITNUM          Number of the logging flag bit.
;  682          0673   1 !       BUFFER_ADR      Address of the message buffer.
;  683          0674   1 !       BUFFER_LEN      Length of the message in bytes.
;  684          0675   1 !       TXTDSC          Descriptor of text string.
;  685          0676   1 !
;  686          0677   1 ! IMPLICIT INPUTS:
;  687          0678   1 !
;  688          0679   1 !       NML$GL_LOGMASK  Values of current logging flags.
;  689          0680   1 !
;  690          0681   1 !--
;  691          0682   1
;  692          0683   2 BEGIN
;  693          0684   2
;  694          0685   2 MAP
;  695          0686   2     TXTDSC : REF DESCRIPTOR;
;  696          0687   2
;  697          0688   2 LITERAL
;  698          0689   2     FAOSIZ = 256,                           ! The print buffer.
;  699          0690   2     FAOLST_SIZE = 10,                       ! Size of FAO parameter vector
;  700          0691   2     DUMP_BUFFER_SIZE = 2000;
;  701          0692   2
;  702          0693   2 LOCAL
;  703          0694   2     FAOBUF   : VECTOR [FAOSIZ, BYTE],! Print buffer
;  704          0695   2     FAOLST   : VECTOR [FAOLST_SIZE],      ! List of args to $FAOL
;  705          0696   2     OUTDSC   : VECTOR [2],                ! Descriptor of the output line
;  706          0697   2     BYTES,                                 ! Counter for bytes written
;  707          0698   2     PTR:         REF BBLOCK,
;  708          0699   2     I,                                     ! index
;  709          0700   2     BUFFER_END,                            ! Address of end of message buffer.
;  710          0701   2     DUMP_BUFFER :                          ! Buffer from which the data is dumped.
;  711          0702   2         BBLOCK [DUMP_BUFFER_SIZE];
;  712          0703   2
;  713          0704   2 !
;  714          0705   2 ! If the watcher logical name was set, and the information being logged is
;  715          0706   2 ! a NICE message, write the NICE message to the watcher's mailbox.
;  716          0707   2 !
;  717          0708   2 IF .BITNUM EQL DBG$C_NETIO AND
;  718          0709   2    .NML$GW_WATCHER_CHAN NEQ 0 THEN
;  719          0710   3     BEGIN
;  720          0711   3     $SETRWM (WATFLG = 1);          ! Don't wait if watcher's mailbox is full.
;  721        P 0712   3     $QIOW (FUNC = IO$_WRITEVBLK OR IO$M_NOW,
;  722        P 0713   3            CHAN = .NML$GW_WATCHER_CHAN,
;  723        P 0714   3            P1 = .BUFFER_ADR,
;  724          0715   3            P2 = .BUFFER_LEN);
;  725          0716   3     $SETRWM (WATFLG = 0);          ! Do wait for other resources.
;  726          0717   2     END;
;  727         0718  2 !
;  728         0719  2 ! If the correct logging flag is not set then just return.
;  729         0720  2 !
;  730         0721  2 IF NOT .NML$GL_LOGMASK [.BITNUM] THEN
;  731         0722  2     RETURN;
;  732         0723  2 !
;  733         0724  2 ! If the string length is nonzero then print it.
;  734         0725  2 !
;  735         0726  2 IF .TXTDSC NEQA 0 THEN
;  736         0727  3     BEGIN
;  737         0728  3
;  738         0729  3     OUTDSC [0] = FAOSIZ;
;  739         0730  3     OUTDSC [1] = FAOBUF;
;  740         0731  3
;  741         0732  3     FAOLST [0] = .TXTDSC [DSC$W_LENGTH];
;  742         0733  3     FAOLST [1] = .TXTDSC [DSC$A_POINTER];
;  743         0734  3     FAOLST [2] = .BUFFER_LEN;
;  744         0735  3
;  745       P 0736  3     $FAOL (CTRSTR = $ASCID ('!/ !AD  (length = !UL bytes)!/'),
;  746       P 0737  3             OUTLEN = OUTDSC [0],
;  747       P 0738  3             OUTBUF = OUTDSC,
;  748         0739  3             PRMLST = FAOLST);
;  749         0740  3
;  750         0741  3     LIB$PUT_OUTPUT (OUTDSC);
;  751         0742  3
;  752         0743  2     END;
;  753         0744  2 !
;  754         0745  2 ! Dumping permanent data base records requires BYPASS privilege because the
;  755         0746  2 ! passwords are displayed.
;  756         0747  2 !
;  757         0748  3 IF (.BITNUM EQL DBG$C_FILEIO)
;  758         0749  3     AND (NOT .NML$GQ_PROPRVMSK [PRV$V_BYPASS])
;  759         0750  3     AND (NOT .NML$GQ_PROPRVMSK [PRV$V_READALL]) THEN
;  760         0751  2     RETURN;
;  761         0752  2
;  762         0753  2 !
;  763         0754  2 ! Move the data to be dumped into the dump buffer, filling it with zeros.
;  764         0755  2 ! This ensures that any information past the end of the buffer is printed
;  765         0756  2 ! as zeros.
;  766         0757  2 !
;  767         0758  2 CH$COPY (.BUFFER_LEN, .BUFFER_ADR, 0, DUMP_BUFFER_SIZE, DUMP_BUFFER);
;  768         0759  2 !
;  769         0760  2 ! Dump the buffer contents in hex and ASCII.
;  770         0761  2 !
;  771         0762  2 OUTDSC [1] = FAOBUF;
;  772         0763  2 PTR = DUMP_BUFFER;
;  773         0764  2 BUFFER_END = DUMP_BUFFER + .BUFFER_LEN;
;  774         0765  2 WHILE .PTR LSS .BUFFER_END DO
;  775         0766  3     BEGIN
;  776         0767  3     OUTDSC [0] = FAOSIZ;
;  777         0768  3     FAOLST [0] = .PTR [12,0,32,0];
;  778         0769  3     FAOLST [1] = .PTR [8,0,32,0];
;  779         0770  3     FAOLST [2] = .PTR [4,0,32,0];
;  780         0771  3     FAOLST [3] = .PTR [0,0,32,0];
;  781         0772  3     FAOLST [4] = 16;
;  782         0773  3     FAOLST [5] = .PTR;
;  783       P 0774  3     $FAOL (CTRSTR = $ASCID ('!XL !XL !XL !XL !_!AF'),
;   784         P 0775  3                   OUTLEN = OUTDSC [0],
;   785         P 0776  3                   OUTBUF = OUTDSC,
;   786           0777  3                   PRMLST = FAOLST);
;   787           0778  3           LIB$PUT_OUTPUT (OUTDSC);
;   788           0779  3           PTR = .PTR + 16;
;   789           0780  2           END;
;   790           0781  2   !
;   791           0782  2   ! Add a new line.
;   792           0783  2   !
;   793         P 0784  2   $FAOL     (CTRSTR = $ASCID ('!/'),
;   794         P 0785  2              OUTLEN = OUTDSC [0],
;   795         P 0786  2              OUTBUF = OUTDSC,
;   796           0787  2              PRMLST = 0);
;   797           0788  2   LIB$PUT_OUTPUT (OUTDSC);
;   798           0789  2
;   799           0790  1   END;                                         ! End of NML$DEBUG_MSG



                                                                           .PSECT   $PLIT$,NOWRT,NOEXE,2

68 74 67 6E 65 6C 28 20 20 44 41 21 20 2F 21  00014 P.AAE:   .ASCII   \!/ !AD  (length = !UL bytes)!/\            ;
2F 21 29 73 65 74 79 62 20 4C 55 21 20 3D 20  00023                                                              ;
                                              00032          .BLKB    2
                                   0000001E   00034 P.AAD:   .LONG    30                                          ;
                                   00000000'  00038          .ADDRESS P.AAE                                       ;
4C 58 21 20 4C 58 21 20 4C 58 21 20 4C 58 21  0003C P.AAG:   .ASCII   \!XL !XL !XL !XL !_!AF\                     ;
                           46 41 21 5F 21 20  0004B                                                              ;
                                              00051          .BLKB    3
                                   00000015   00054 P.AAF:   .LONG    21                                          ;
                                   00000000'  00058          .ADDRESS P.AAG                                       ;
                                      2F 21   0005C P.AAI:   .ASCII   \!/\                                        ;
                                              0005E          .BLKB    2
                                   00000002   00060 P.AAH:   .LONG    2                                           ;
                                   00000000'  00064          .ADDRESS P.AAI                                       ;

                                                             .EXTRN   SYS$SETRWM, SYS$QIOW

                                                             .PSECT   $CODE$,NOWRT,2

                                       07FC 00000            .ENTRY   NML$DEBUG_MSG, Save R2,R3,R4,R5,R6,R7,R8,-   ; 0662
                                                                      R9,R10
                     5A 00000000G  00  9E 00002            MOVAB    NML$GW_WATCHER_CHAN, R10                    ;
                     59 00000000G  00  9E 00009            MOVAB    SYS$SETRWM, R9                              ;
                     58 00000000G  00  9E 00010            MOVAB    LIB$PUT_OUTPUT, R8                          ;
                     57 00000000G  00  9E 00017            MOVAB    SYS$FAOL, R7                                ;
                     56 00000000'  00  9E 0001E            MOVAB    P.AAD, R6                                   ;
                     5E       F700 CE  9E 00025            MOVAB    -2304(SP), SP                               ;
                     52         04 AC  D0 0002A            MOVL     BITNUM, R2                                  ; 0708
                                   2A  12 0002E            BNEQ     1$                                          ;
                                   6A  B5 00030            TSTW     NML$GW_WATCHER_CHAN                         ; 0709
                                   26  13 00032            BEQL     1$                                          ;
                                   01  DD 00034            PUSHL    #1                                          ; 0711
                     69            01  FB 00036            CALLS    #1, SYS$SETRWM                              ;
                                   7E  7C 00039            CLRQ     -(SP)                                       ; 0715
                                   7E  7C 0003B            CLRQ     -(SP)                                       ;
                     7E         08 AC  7D 0003D            MOVQ     BUFFER_ADR, -(SP)                           ;
```

```
                                                     7E 7C 00041        CLRQ     -(SP)                                         ;
                                                     7E D4 00043        CLRL     -(SP)                                         ;
                                     7E         70   8F 9A 00045        MOVZBL   #112, -(SP)                                   ;
                                     7E              6A 3C 00049        MOVZWL   NML$GW_WATCHER_CHAN, -(SP)                    ;
                                                     7E D4 0004C        CLRL     -(SP)                                         ;
                         00000000G   00              0C FB 0004E        CALLS    #12, SYS$QIOW                                 ;
                                                     7E D4 00055        CLRL     -(SP)                                         ; 0716
                                     69              01 FB 00057        CALLS    #1, SYS$SETRWM                                ;
                      01 00000000G   00              52 E0 0005A 1$:    BBS      R2, NML$GL_LOGMASK, 2$                        ; 0721
                                                        04 00062        RET                                                    ;
                                     50         10   AC D0 00063 2$:    MOVL     TXTDSC, R0                                    ; 0726
                                                     37 13 00067        BEQL     3$                                            ;
                              FED0   CD       0100   8F 3C 00069        MOVZWL   #256, OUTDSC                                  ; 0729
                              FED4   CD       FF00   CD 9E 00070        MOVAB    FAOBUF, OUTDSC+4                              ; 0730
                              FED8   CD              60 3C 00077        MOVZWL   (R0), FAOLST                                  ; 0732
                              FEDC   CD         04   A0 D0 0007C        MOVL     4(R0), FAOLST+4                               ; 0733
                              FEE0   CD         0C   AC D0 00082        MOVL     BUFFER_LEN, FAOLST+8                          ; 0734
                                              FED8   CD 9F 00088        PUSHAB   FAOLST                                        ; 0739
                                              FED0   CD 9F 0008C        PUSHAB   OUTDSC                                        ;
                                              FED0   CD 9F 00090        PUSHAB   OUTDSC                                        ;
                                                     56 DD 00094        PUSHL    R6                                            ;
                                     67              04 FB 00096        CALLS    #4, SYS$FAOL                                  ;
                                              FED0   CD 9F 00099        PUSHAB   OUTDSC                                        ; 0741
                                     68              01 FB 0009D        CALLS    #1, LIB$PUT_OUTPUT                            ;
                                     01              52 D1 000A0 3$:    CMPL     R2, #1                                        ; 0748
                                                     10 12 000A3        BNEQ     4$                                            ;
                      08 00000000G   00              05 E0 000A5        BBS      #5, NML$GQ_PROPRVMSK+3, 4$                    ; 0749
                      7E 00000000G   00              03 E1 000AD        BBC      #3, NML$GQ_PROPRVMSK+4, 7$                    ; 0750
    07D0    8F        00        08   BC         0C   AC 2C 000B5 4$:    MOVC5    BUFFER_LEN, @BUFFER_ADR, #0, #2000, -         ; 0758
                                                     6E    000BE                 DUMP_BUFFER                                   ;
                              FED4   CD       FF00   CD 9E 000BF        MOVAB    FAOBUF, OUTDSC+4                              ; 0762
                                     52              6E 9E 000C6        MOVAB    DUMP_BUFFER, PTR                              ; 0763
                                     50              6E 9E 000C9        MOVAB    DUMP_BUFFER, R0                               ; 0764
                      53             50         0C   AC C1 000CC        ADDL3    BUFFER_LEN, R0, BUFFER_END                    ;
                                     53              52 D1 000D1 5$:    CMPL     PTR, BUFFER_END                               ; 0765
                                                     46 18 000D4        BGEQ     6$                                            ;
                              FED0   CD       0100   8F 3C 000D6        MOVZWL   #256, OUTDSC                                  ; 0767
                              FED8   CD         0C   A2 D0 000DD        MOVL     12(PTR), FAOLST                               ; 0768
                              FEDC   CD         08   A2 D0 000E3        MOVL     8(PTR), FAOLST+4                              ; 0769
                              FEE0   CD         04   A2 D0 000E9        MOVL     4(PTR), FAOLST+8                              ; 0770
                              FEE4   CD              62 D0 000EF        MOVL     (PTR), FAOLST+12                              ; 0771
                              FEE8   CD              10 D0 000F4        MOVL     #16, FAOLST+16                                ; 0772
                              FEEC   CD              52 D0 000F9        MOVL     PTR, FAOLST+20                                ; 0773
                                              FED8   CD 9F 000FE        PUSHAB   FAOLST                                        ; 0777
                                              FED0   CD 9F 00102        PUSHAB   OUTDSC                                        ;
                                              FED0   CD 9F 00106        PUSHAB   OUTDSC                                        ;
                                                20   A6 9F 0010A        PUSHAB   P.AAF                                         ;
                                     67              04 FB 0010D        CALLS    #4, SYS$FAOL                                  ;
                                              FED0   CD 9F 00110        PUSHAB   OUTDSC                                        ; 0778
                                     68              01 FB 00114        CALLS    #1, LIB$PUT_OUTPUT                            ;
                                     52              10 C0 00117        ADDL2    #16, PTR                                      ; 0779
                                                     B5 11 0011A        BRB      5$                                            ; 0765
                                                     7E D4 0011C 6$:    CLRL     -(SP)                                         ; 0787
                                              FED0   CD 9F 0011E        PUSHAB   OUTDSC                                        ;
                                              FED0   CD 9F 00122        PUSHAB   OUTDSC                                        ;
                                                2C   A6 9F 00126        PUSHAB   P.AAH                                         ;
                                     67              04 FB 00129        CALLS    #4, SYS$FAOL                                  ;
```

```
                                    FED0    CD   9F 0012C          PUSHAB  OUTDSC                                      ; 0788
                             68              01   FB 00130          CALLS   #1, LIB$PUT_OUTPUT                          ;
                                                  04 00133 7$:      RET                                                 ; 0790

; Routine Size:  308 bytes,    Routine Base:  $CODE$ + 026B
```

```
  1 %SBTTL 'NML$DEBUG_QIO  Print NETACP QIO information'
  1 GLOBAL ROUTINE NML$DEBUG_QIO (BITNUM, QIOS, IOSB, P1DSC,
  1                               P2DSC, P3ADR, P4DSC, TXTDSC) : NOVALUE =
  1
  1 !++
  1 ! FUNCTIONAL DESCRIPTION:
  1 !
  1 !       This routine dumps NETACP QIO information to SYS$OUTPUT.
  1 !
  1 ! FORMAL PARAMETERS:
  1 !
  1 !       BITNUM          Contains the number of the logging flag bit.
  1 !       QIOS            Status of QIO (R0).
  1 !       IOSB            Address of I/O status block.
  1 !       P1DSC           Address of P1 descriptor.
  1 !       P2DSC           Address of P2 descriptor.
  1 !       P3ADR           Address of P3 word.
  1 !       P4DSC           Address of P4 descriptor.
  1 !       TXTDSC          Descriptor of text string.
  1 !
  1 ! IMPLICIT INPUTS:
  1 !
  1 !       NML$GL_LOGMASK  Values of current logging flags.
  1 !
  1 !--
  1
  2 BEGIN
  2
  2 MAP
  2       IOSB   : REF $IOSB,
  2       P1DSC : REF DESCRIPTOR,
  2       P2DSC  : REF DESCRIPTOR,
  2       P4DSC  : REF DESCRIPTOR;
  2
  2 BIND
P 2       FAOSTR = $ASCID ('!/R0=!XL IOSB=!XL/!XL NFB=!XW/!XL',
  2                        '!/P2=!XW/!XL P3=!XL (!XW) P4=!XW/!XL');
  2
  2 LITERAL
  2       FAOSIZ = 256;                    ! The print buffer
  2
  2 LOCAL
  2       FAOBUF : VECTOR [FAOSIZ, BYTE], ! Print buffer
  2       FAOLST : VECTOR [20],           ! List of args to $FAOL
  2       OUTDSC : VECTOR [2],            ! Descriptor of the output line
  2       BUFSIZ;
  2 !
  2 ! If the correct logging flag is not enabled then just return.
  2 !
  2 IF NOT .NML$GL_LOGMASK [.BITNUM]
  2 THEN
  2       RETURN;
  2
  2 !
  2 ! Print header message at beginning of QIO information.
  2 !
  2 IF .TXTDSC NEQ 0 THEN
```

```
;  858        0848  2       NML$DEBUG_TXT (.BITNUM, .TXTDSC);
;  859        0849  2
;  860        0850  2   OUTDSC [0] = FAOSIZ;
;  861        0851  2   OUTDSC [1] = FAOBUF;
;  862        0852  2   !
;  863        0853  2   ! Log the QIO completion status, IOSB, and the values of the QIO
;  864        0854  2   ! parameters.
;  865        0855  2   !
;  866        0856  2   FAOLST [0] = .QIOS;
;  867        0857  2   FAOLST [1] = .IOSB [0,0,32,0];
;  868        0858  2   FAOLST [2] = .IOSB [4,0,32,0];
;  869        0859  2
;  870        0860  2   IF .P1DSC NEQA 0 THEN
;  871        0861  3       BEGIN
;  872        0862  3       FAOLST [3] = .P1DSC [DSC$W_LENGTH];
;  873        0863  3       FAOLST [4] = .P1DSC [DSC$A_POINTER];
;  874        0864  3       END
;  875        0865  2   ELSE
;  876        0866  3       BEGIN
;  877        0867  3       FAOLST [3] = 0;
;  878        0868  3       FAOLST [4] = 0;
;  879        0869  3       END;
;  880        0870  2
;  881        0871  2   IF .P2DSC NEQA 0
;  882        0872  2   THEN
;  883        0873  3           BEGIN
;  884        0874  3
;  885        0875  3           FAOLST [5] = .P2DSC [DSC$W_LENGTH];
;  886        0876  3           FAOLST [6] = .P2DSC [DSC$A_POINTER];
;  887        0877  3
;  888        0878  3           END
;  889        0879  2   ELSE
;  890        0880  3           BEGIN
;  891        0881  3
;  892        0882  3           FAOLST [5] = 0;
;  893        0883  3           FAOLST [6] = 0;
;  894        0884  3
;  895        0885  3           END;
;  896        0886  2
;  897        0887  2   FAOLST [7] = .P3ADR;
;  898        0888  2   IF .P3ADR NEQA 0
;  899        0889  2   THEN
;  900        0890  2           FAOLST [8] = .(.P3ADR)<0,16>
;  901        0891  2   ELSE
;  902        0892  2           FAOLST [8] = 0;
;  903        0893  2
;  904        0894  2   IF .P4DSC NEQA 0
;  905        0895  2   THEN
;  906        0896  3           BEGIN
;  907        0897  3
;  908        0898  3           FAOLST [9] = .P4DSC [DSC$W_LENGTH];
;  909        0899  3           FAOLST [10] = .P4DSC [DSC$A_POINTER];
;  910        0900  3
;  911        0901  3           END
;  912        0902  2   ELSE
;  913        0903  3           BEGIN
;  914        0904  3
;  915          0905  3             FAOLST [9] = 0;
;  916          0906  3             FAOLST [10] = 0;
;  917          0907  3
;  918          0908  2             END;
;  919          0909  2
;  920        P 0910  2     $FAOL (CTRSTR = FAOSTR,
;  921        P 0911  2             OUTLEN = OUTDSC [0],
;  922        P 0912  2             OUTBUF = OUTDSC,
;  923          0913  2             PRMLST = FAOLST);
;  924          0914  2
;  925          0915  2     LIB$PUT_OUTPUT (OUTDSC);                          ! Write to SYS$OUTPUT
;  926          0916  2
;  927          0917  2     OUTDSC [0] = 0;
;  928          0918  2     OUTDSC [1] = FAOBUF;
;  929          0919  2     BUFSIZ = FAOSIZ;
;  930          0920  2     IF NOT .QIOS
;  931          0921  2     THEN
;  932          0922  2             NML$ADD_MSG_TXT (.QIOS, BUFSIZ, OUTDSC [0], .OUTDSC [1])
;  933          0923  2     ELSE
;  934          0924  2             NML$ADD_MSG_TXT (.IOSB [IOS$W_STATUS],
;  935          0925  2                              BUFSIZ,
;  936          0926  2                              OUTDSC [0],
;  937          0927  2                              .OUTDSC [1]);
;  938          0928  2
;  939          0929  2     LIB$PUT_OUTPUT (OUTDSC);                          ! Write to SYS$OUTPUT
;  940          0930  2
;  941          0931  2     !
;  942          0932  2     ! Dump the contents of the NFB, the P2 (Key) buffer, and the P4 (Value) buffer.
;  943          0933  2     !
;  944          0934  2     NML$DUMP_QIO_BUFS (.BITNUM, .P1DSC, .P2DSC, .P4DSC, .P3ADR);
;  945          0935  2
;  946          0936  1     END;                                      ! End of NML$DEBUG_QIO



                                                                    .PSECT  $PLIT$,NOWRT,NOEXE,2

21 3D 42 53 4F 49 20 4C 58 21 3D 30 52 2F 21  00068 P.AAK:   .ASCII  \!/R0=!XL IOSB=!XL/!XL NFB=!XW/!XL!/P2=!X\  ;
2F 57 58 21 3D 42 46 4E 20 4C 58 21 2F 4C 58  00077                                                              ;
               58 21 3D 32 50 2F 21 4C 58 21  00086                                                              ;
21 28 20 4C 58 21 3D 33 50 20 4C 58 21 2F 57  00090          .ASCII  \W/!XL P3=!XL (!XW) P4=!XW/!XL\             ;
   4C 58 21 2F 57 58 21 3D 34 50 20 29 57 58  0009F                                                              ;
                                              000AD          .BLKB   3
                                   00000045   000B0 P.AAJ:   .LONG   69                                          ;
                                   00000000'  000B4          .ADDRESS P.AAK                                      ;

                                                    FAOSTR=          P.AAJ


                                                             .PSECT  $CODE$,NOWRT,2

                                      007C  00000            .ENTRY  NML$DEBUG_QIO, Save R2,R3,R4,R5,R6          ; 0792
                    56 00000000G  00   9E  00002            MOVAB   LIB$PUT_OUTPUT, R6                          ;
                    5E      FEA4  CE   9E  00009            MOVAB   -348(SP), SP                                ;
          01 00000000G  00    04  AC   E0  0000E            BBS     BITNUM, NML$GL_LOGMASK, 1$                  ; 0840
                                       04  00017            RET                                                 ;
                              20  AC   D5  00018 1$:        TSTL    TXTDSC                                      ; 0847
```

```
                                 0B  13 0001B       BEQL    2$                        ;
                         20      AC  DD 0001D       PUSHL   TXTDSC                    ; 0848
                         04      AC  DD 00020       PUSHL   BITNUM                    ;
      FE66    CF                 02  FB 00023       CALLS   #2, NML$DEBUG_TXT         ;
        04    AE       0100      8F  3C 00028 2$:   MOVZWL  #256, OUTDSC              ; 0850
        08    AE         5C      AE  9E 0002E       MOVAB   FAOBUF, OUTDSC+4          ; 0851
        0C    AE         08      AC  D0 00033       MOVL    QIOS, FAOLST              ; 0856
              55         0C      AC  D0 00038       MOVL    IOSB, R5                  ; 0857
        10    AE                 65  7D 0003C       MOVQ    (R5), FAOLST+4            ;
              54         10      AC  D0 00040       MOVL    P1DSC, R4                 ; 0860
                                 0B  13 00044       BEQL    3$                        ;
        18    AE                 64  3C 00046       MOVZWL  (R4), FAOLST+12           ; 0862
        1C    AE         04      A4  D0 0004A       MOVL    4(R4), FAOLST+16          ; 0863
                                 03  11 0004F       BRB     4$                        ; 0860
                         18      AE  7C 00051 3$:   CLRQ    FAOLST+12                 ; 0867
              53         14      AC  D0 00054 4$:   MOVL    P2DSC, R3                 ; 0871
                                 0B  13 00058       BEQL    5$                        ;
        20    AE                 63  3C 0005A       MOVZWL  (R3), FAOLST+20           ; 0875
        24    AE         04      A3  D0 0005E       MOVL    4(R3), FAOLST+24          ; 0876
                                 03  11 00063       BRB     6$                        ; 0871
                         20      AE  7C 00065 5$:   CLRQ    FAOLST+20                 ; 0882
        28    AE         18      AC  D0 00068 6$:   MOVL    P3ADR, FAOLST+28          ; 0887
                                 07  13 0006D       BEQL    7$                        ; 0888
        2C    AE         18      BC  3C 0006F       MOVZWL  @P3ADR, FAOLST+32         ; 0890
                                 03  11 00074       BRB     8$                        ;
                         2C      AE  D4 00076 7$:   CLRL    FAOLST+32                 ; 0892
              52         1C      AC  D0 00079 8$:   MOVL    P4DSC, R2                 ; 0894
                                 0B  13 0007D       BEQL    9$                        ;
        30    AE                 62  3C 0007F       MOVZWL  (R2), FAOLST+36           ; 0898
        34    AE         04      A2  D0 00083       MOVL    4(R2), FAOLST+40          ; 0899
                                 03  11 00088       BRB     10$                       ; 0894
                         30      AE  7C 0008A 9$:   CLRQ    FAOLST+36                 ; 0905
                         0C      AE  9F 0008D 10$:  PUSHAB  FAOLST                    ; 0913
                         08      AE  9F 00090       PUSHAB  OUTDSC                    ;
                         0C      AE  9F 00093       PUSHAB  OUTDSC                    ;
                  00000000'      00  9F 00096       PUSHAB  FAOSTR                    ;
 00000000G    00                 04  FB 0009C       CALLS   #4, SYS$FAOL              ;
                         04      AE  9F 000A3       PUSHAB  OUTDSC                    ; 0915
              66                 01  FB 000A6       CALLS   #1, LIB$PUT_OUTPUT        ;
                         04      AE  D4 000A9       CLRL    OUTDSC                    ; 0917
        08    AE         5C      AE  9E 000AC       MOVAB   FAOBUF, OUTDSC+4          ; 0918
              6E       0100      8F  3C 000B1       MOVZWL  #256, BUFSIZ              ; 0919
              0E         08      AC  E8 000B6       BLBS    QIOS, 11$                 ; 0922
                         08      AE  DD 000BA       PUSHL   OUTDSC+4                  ;
                         08      AE  9F 000BD       PUSHAB  OUTDSC                    ;
                         08      AE  9F 000C0       PUSHAB  BUFSIZ                    ;
                         08      AC  DD 000C3       PUSHL   QIOS                      ;
                         0C      11     000C6       BRB     12$                       ;
                         08      AE  DD 000C8 11$:  PUSHL   OUTDSC+4                  ; 0927
                         08      AE  9F 000CB       PUSHAB  OUTDSC                    ; 0926
                         08      AE  9F 000CE       PUSHAB  BUFSIZ                    ; 0924
              7E                 65  3C 000D1       MOVZWL  (R5), -(SP)               ;
      FC6D    CF                 04  FB 000D4 12$:  CALLS   #4, NML$ADD_MSG_TXT       ;
                         04      AE  9F 000D9       PUSHAB  OUTDSC                    ; 0929
              66                 01  FB 000DC       CALLS   #1, LIB$PUT_OUTPUT        ;
                         18      AC  DD 000DF       PUSHL   P3ADR                     ; 0934
                                 52  DD 000E2       PUSHL   R2                        ;
```

```
                                        53  DD 000E4          PUSHL   R3                                          ;
                                        54  DD 000E6          PUSHL   R4                                          ;
                                   04   AC  DD 000E8          PUSHL   BITNUM                                      ;
                     00000000V  00      05  FB 000EB          CALLS   #5, NML$DUMP_QIO_BUFS                       ;
                                            04 000F2          RET                                                 ; 0936

; Routine Size:  243 bytes,     Routine Base:  $CODE$ + 039F
;  948       0937 1
;  949       0938 1 %SBTTL 'NML$DUMP_QIO_BUFS  Dump QIO buffers'
;  950       0939 1 GLOBAL ROUTINE NML$DUMP_QIO_BUFS (BITNUM, P1DSC, P2DSC, P4DSC, P3ADR) :
;  951       0940 1                                                         NOVALUE =
;  952       0941 1
;  953       0942 2 BEGIN
;  954       0943 2
;  955       0944 2 LOCAL
;  956       0945 2         P4LEN;          ! Length of P4 buffer
;  957       0946 2
;  958       0947 2 MAP
;  959       0948 2         P1DSC   : REF DESCRIPTOR,
;  960       0949 2         P2DSC   : REF DESCRIPTOR,
;  961       0950 2         P4DSC   : REF DESCRIPTOR;
;  962       0951 2
;  963       0952 2 IF .P1DSC NEQ 0 THEN
;  964       0953 2     NML$DEBUG_MSG ( .BITNUM,
;  965       0954 2                     .P1DSC [DSC$A_POINTER],
;  966       0955 2                     .P1DSC [DSC$W_LENGTH],
;  967       0956 2                     $ASCID('P1 buffer contents'));
;  968       0957 2
;  969       0958 2 IF .P2DSC NEQ 0
;  970       0959 2 THEN
;  971       0960 2     NML$DEBUG_MSG ( .BITNUM,
;  972       0961 2                     .P2DSC [DSC$A_POINTER],
;  973       0962 2                     .P2DSC [DSC$W_LENGTH],
;  974       0963 2                     $ASCID ('P2 buffer contents'));
;  975       0964 2
;  976       0965 2 IF .P4DSC NEQ 0
;  977       0966 2 THEN
;  978       0967 3     BEGIN
;  979       0968 3     !
;  980       0969 3     ! Figure out how much of the P4 buffer to dump.  If it's a
;  981       0970 3     ! show, the byte count was returned in P3.  If it's a set,
;  982       0971 3     ! the byte count is in the P4 buffer descriptor.
;  983       0972 3     !
;  984       0973 3     IF .P3ADR NEQ 0 THEN
;  985       0974 3         IF .(.P3ADR)<0,16> GTR NML$K_QIOBFLEN THEN
;  986       0975 3             P4LEN = 64
;  987       0976 3         ELSE
;  988       0977 3             P4LEN = .(.P3ADR)<0,16>
;  989       0978 3     ELSE
;  990       0979 3         P4LEN = .P4DSC [DSC$W_LENGTH];
;  991       0980 3     NML$DEBUG_MSG ( .BITNUM,
;  992       0981 3                     .P4DSC [DSC$A_POINTER],
;  993       0982 3                     .P4LEN,
;  994       0983 3                     $ASCID ('P4 buffer contents'));
;  995       0984 2     END;
;  996       0985 1 END;     ! of  NML$DUMP_QIO_BUFS


                                                                        .PSECT  $PLIT$,NOWRT,NOEXE,2

65 74 6E 6F 63 20 72 65 66 66 75 62 20 31 50  000B8 P.AAM:  .ASCII  \P1 buffer contents\                  ;
                                    73 74 6E  000C7                                                       ;
                                              000CA         .BLKB   2
```

```
                                                                00000012. 000CC P.AAL:    .LONG    18                                                 ;
                                                                00000000' 000D0           .ADDRESS P.AAM                                              ;
 65   74   6E   6F   63   20   72   65   66   66   75   62   20   32   50 000D4 P.AAO:    .ASCII   \P2 buffer contents\                              ;
                                                             73   74   6E 000E3                                                                       ;
                                                                          000E6           .BLKB    2                                                  ;
                                                                00000012. 000E8 P.AAN:    .LONG    18                                                 ;
                                                                00000000' 000EC           .ADDRESS P.AAO                                              ;
 65   74   6E   6F   63   20   72   65   66   66   75   62   20   34   50 000F0 P.AAQ:    .ASCII   \P4 buffer contents\                              ;
                                                             73   74   6E 000FF                                                                       ;
                                                                          00102           .BLKB    2                                                  ;
                                                                00000012. 00104 P.AAP:    .LONG    18                                                 ;
                                                                00000000' 00108           .ADDRESS P.AAQ                                              ;


                                                                                          .PSECT   $CODE$,NOWRT,2

                                                                     000C 00000           .ENTRY   NML$DUMP_QIO_BUFS, Save R2,R3                      ; 0939
                                                   53 00000000'   00   9E 00002           MOVAB    P.AAL, R3                                          ;
                                                   52      FDCC   CF   9E 00009           MOVAB    NML$DEBUG_MSG, R2                                  ;
                                                   50        08   AC   D0 0000E           MOVL     P1DSC, R0                                          ; 0952
                                                                  0E   13 00012           BEQL     1$                                                 ;
                                                                  53   DD 00014           PUSHL    R3                                                 ; 0956
                                                   7E             60   3C 00016           MOVZWL   (R0), -(SP)                                        ; 0955
                                                             04   A0   DD 00019           PUSHL    4(R0)                                              ; 0954
                                                             04   AC   DD 0001C           PUSHL    BITNUM                                             ; 0953
                                                   62             04   FB 0001F           CALLS    #4, NML$DEBUG_MSG                                  ;
                                                   50        0C   AC   D0 00022 1$:       MOVL     P2DSC, R0                                          ; 0958
                                                                  0F   13 00026           BEQL     2$                                                 ;
                                                             1C   A3   9F 00028           PUSHAB   P.AAN                                              ; 0963
                                                   7E             60   3C 0002B           MOVZWL   (R0), -(SP)                                        ; 0962
                                                             04   A0   DD 0002E           PUSHL    4(R0)                                              ; 0961
                                                             04   AC   DD 00031           PUSHL    BITNUM                                             ; 0960
                                                   62             04   FB 00034           CALLS    #4, NML$DEBUG_MSG                                  ;
                                                   51        10   AC   D0 00037 2$:       MOVL     P4DSC, R1                                          ; 0965
                                                                  2A   13 0003B           BEQL     6$                                                 ;
                                                             14   AC   D5 0003D           TSTL     P3ADR                                              ; 0973
                                                                  14   13 00040           BEQL     4$                                                 ;
                                         04B0      8F        14   BC   B1 00042           CMPW     @P3ADR, #1200                                      ; 0974
                                                                  06   1B 00048           BLEQU    3$                                                 ;
                                                   50        40   8F   9A 0004A           MOVZBL   #64, P4LEN                                         ; 0975
                                                                  09   11 0004E           BRB      5$                                                 ;
                                                   50        14   BC   3C 00050 3$:       MOVZWL   @P3ADR, P4LEN                                      ; 0977
                                                                  03   11 00054           BRB      5$                                                 ; 0974
                                                   50             61   3C 00056 4$:       MOVZWL   (R1), P4LEN                                        ; 0979
                                                             38   A3   9F 00059 5$:       PUSHAB   P.AAP                                              ; 0983
                                                                  50   DD 0005C           PUSHL    P4LEN                                              ; 0982
                                                             04   A1   DD 0005E           PUSHL    4(R1)                                              ; 0981
                                                             04   AC   DD 00061           PUSHL    BITNUM                                             ; 0980
                                                   62             04   FB 00064           CALLS    #4, NML$DEBUG_MSG                                  ;
                                                                       04 00067 6$:       RET                                                         ; 0985

; Routine Size:  104 bytes,    Routine Base:  $CODE$ + 0492
;  998        0986  1 %SBTTL 'NML$LOGALLPDB  Log contents of permanent data base files'
;  999        0987  1 GLOBAL ROUTINE NML$LOGALLPDB : NOVALUE =
; 1000        0988  1
; 1001        0989  1 !++
; 1002        0990  1 ! FUNCTIONAL DESCRIPTION:
; 1003        0991  1 !
; 1004        0992  1 !       This routine logs the contents of all permanent data base files
; 1005        0993  1 !       according to the setting of the logging bits.
; 1006        0994  1 !
; 1007        0995  1 !--
; 1008        0996  1
; 1009        0997  2     BEGIN
; 1010        0998  2
; 1011        0999  2     OWN
; 1012        1000  2         TAB : VECTOR [NMA$C_OPN_MAX - NMA$C_OPN_MIN + 1]
; 1013        1001  2               INITIAL (DBG$C_DMPNOD,
; 1014        1002  2                        DBG$C_DMPLIN,
; 1015        1003  2                        DBG$C_DMPLOG,
; 1016        1004  2                        DBG$C_DMPOBJ,
; 1017        1005  2                        DBG$C_DMPCIR,
; 1018        1006  2                        DBG$C_DMPX25,
; 1019        1007  2                        DBG$C_DMPX29,
; 1020        1008  2                        DBG$C_DMPCNF);
; 1021        1009  2
; 1022        1010  2     INCR IDX FROM NMA$C_OPN_MIN TO NMA$C_OPN_MAX DO
; 1023        1011  3         BEGIN
; 1024        1012  3
; 1025        1013  3         IF .NML$GL_LOGMASK [.TAB[.IDX]] THEN
; 1026        1014  4                 BEGIN
; 1027        1015  4                 IF NMA$OPENFILE (.IDX, NMA$C_OPN_AC_RO) THEN
; 1028        1016  5                         BEGIN
; 1029        1017  5                         NML$FILEDMP (.TAB [.IDX], .IDX);
; 1030        1018  5                         NML$CLOSEFILE (.IDX);
; 1031        1019  4                         END;
; 1032        1020  3                 END;
; 1033        1021  2         END;
; 1034        1022  2
; 1035        1023  1     END;                                           ! End of NML$LOGALLPDB


                                                                            .PSECT  $OWN$,NOEXE,2

                                                            000FF           .BLKB   1
00000015  00000014  00000013  00000012  00000011  00000010  00100 TAB:      .LONG   16, 17, 18, 19, 20, 21, 22, 23                      ;
                                          00000017  00000016  00118                                                                  ;


                                                                            .PSECT  $CODE$,NOWRT,2

                                                      000C 00000            .ENTRY  NML$LOGALLPDB, Save R2,R3                            ; 0987
                                                   52   D4 00002            CLRL    IDX                                                  ; 1010
                                   53 00000000'0042   DE 00004 1$:         MOVAL   TAB[IDX], R3                                         ; 1013
                          22 00000000G  00         63   E1 0000C            BBC     (R3), NML$GL_LOGMASK, 2$                             ;
                                                   7E   D4 00014            CLRL    -(SP)                                                ; 1015
                                                   52   DD 00016            PUSHL   IDX                                                  ;
```

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NML$
V04-

; Ro
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                   00000000G  00               02  FB 00018         CALLS   #2, NMA$OPENFILE                          ;
                              14               50  E9 0001F         BLBC    R0, 2$                                    ;
                                               52  DD 00022         PUSHL   IDX                                       ; 1017
                                               63  DD 00024         PUSHL   (R3)                                      ;
                   00000000V  00               02  FB 00026         CALLS   #2, NML$FILEDMP                           ;
                                               52  DD 0002D         PUSHL   IDX                                       ; 1018
                   00000000G  00               01  FB 0002F         CALLS   #1, NML$CLOSEFILE                         ;
               CA             52               07  F3 00036  2$:    AOBLEQ  #7, IDX, 1$                               ; 1010
                                                   04 0003A         RET                                               ; 1023

; Routine Size:  59 bytes,    Routine Base:  $CODE$ + 04FA
; 1037        1024  1 %SBTTL 'NML$FILEDMP  Dump all the records in the file'
; 1038        1025  1 GLOBAL ROUTINE NML$FILEDMP (BITNUM, FID) : NOVALUE =
; 1039        1026  1
; 1040        1027  1 !++
; 1041        1028  1 ! FUNCTIONAL DESCRIPTION:
; 1042        1029  1 !
; 1043        1030  1 !
; 1044        1031  1 ! FORMAL PARAMETERS:
; 1045        1032  1 !
; 1046        1033  1 !       BITNUM          Logging flag bit number.
; 1047        1034  1 !       FID             Permanent data base file identification code.
; 1048        1035  1 !
; 1049        1036  1 ! IMPLICIT INPUTS:
; 1050        1037  1 !
; 1051        1038  1 !       NML$GL_LOGMASK  Values of current logging flags.
; 1052        1039  1 !
; 1053        1040  1 ! IMPLICIT OUTPUTS:
; 1054        1041  1 !
; 1055        1042  1 !
; 1056        1043  1 ! ROUTINE VALUE:
; 1057        1044  1 ! COMPLETION CODES:
; 1058        1045  1 !
; 1059        1046  1 !       NONE
; 1060        1047  1 !
; 1061        1048  1 ! SIDE EFFECTS:
; 1062        1049  1 !
; 1063        1050  1 !       NONE
; 1064        1051  1 !
; 1065        1052  1 !--
; 1066        1053  1
; 1067        1054  2     BEGIN
; 1068        1055  2
; 1069        1056  2     LITERAL
; 1070        1057  2         FAOSIZ = 256;                       ! The print buffer
; 1071        1058  2
; 1072        1059  2     LOCAL
; 1073        1060  2         FAOBUF : VECTOR [FAOSIZ, BYTE],     ! Print buffer
; 1074        1061  2         FAOLST : VECTOR [100],              ! List of args to $FAOL
; 1075        1062  2         OUTDSC : DESCRIPTOR,                ! Descriptor of the output line
; 1076        1063  2         SAVEFLAG,                           ! Temporary file I/O logging flag
; 1077        1064  2         KEY    : WORD,                      ! Temporary record key buffer
; 1078        1065  2         RECDSC : DESCRIPTOR;                ! Record descriptor
; 1079        1066  2 !
; 1080        1067  2 ! If logging for this file is not enabled then just return.
; 1081        1068  2 !
; 1082        1069  2     IF NOT .NML$GL_LOGMASK [.BITNUM]
; 1083        1070  2     THEN
; 1084        1071  2         RETURN;
; 1085        1072  2 !
; 1086        1073  2 ! Output the header.
; 1087        1074  2 !
; 1088        1075  2     OUTDSC [DSC$W_LENGTH] = FAOSIZ;
; 1089        1076  2     OUTDSC [DSC$A_POINTER] = FAOBUF;
; 1090        1077  2
; 1091        1078  2     NML$APPENDTXT (.FID,
; 1092        1079  2                 $ASCID ('******************************'),
; 1093        1080  2                 $ASCID ('file dump ********************************'),
```

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NML$
V04-

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42

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; 14
; 1094        1081  2                    OUTDSC,
; 1095        1082  2                    OUTDSC [DSC$W_LENGTH]);
; 1096        1083  2
; 1097        1084  2       LIB$PUT_OUTPUT (OUTDSC);
; 1098        1085  2    !
; 1099        1086  2    ! Save the value of the file I/O logging flag and set it to enable records
; 1100        1087  2    ! to be logged.
; 1101        1088  2    !
; 1102        1089  2       SAVEFLAG = .NML$GL_LOGMASK [DBG$C_FILEIO];
; 1103        1090  2       NML$GL_LOGMASK [DBG$C_FILEIO] = 1;
; 1104        1091  2    !
; 1105        1092  2    ! Read all records.
; 1106        1093  2    !
; 1107        1094  2       KEY = 0;                            ! Initialize record key
; 1108        1095  2       WHILE NMA$READREC (.FID, KEY, NML$GQ_RECBFDSC, RECDSC) DO
; 1109        1096  3           BEGIN
; 1110        1097  3
; 1111        1098  3           KEY = .KEY + 1;
; 1112        1099  3
; 1113        1100  2           END;
; 1114        1101  2    !
; 1115        1102  2    ! Output the trailer.
; 1116        1103  2    !
; 1117        1104  2       OUTDSC [DSC$W_LENGTH] = FAOSIZ;
; 1118        1105  2       OUTDSC [DSC$A_POINTER] = FAOBUF;
; 1119        1106  2
; 1120        1107  2       NML$APPENDTXT (.FID,
; 1121        1108  2                    $ASCID ('************************** End of'),
; 1122        1109  2                    $ASCID ('file dump *****************************'),
; 1123        1110  2                    OUTDSC,
; 1124        1111  2                    OUTDSC [DSC$W_LENGTH]);
; 1125        1112  2
; 1126        1113  2       LIB$PUT_OUTPUT (OUTDSC);
; 1127        1114  2    !
; 1128        1115  2    ! Restore the setting of the file I/O logging flag.
; 1129        1116  2    !
; 1130        1117  2       NML$GL_LOGMASK [DBG$C_FILEIO] = .SAVEFLAG;
; 1131        1118  2
; 1132        1119  1       END;                                                  ! End of NML$FILEDMP


                                                                  .PSECT  $PLIT$,NOWRT,NOEXE,2

2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  0010C P.AAS:  .ASCII  \*****************************\                ;
    2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  0011B
                                                            00129         .BLKB   3
                                                  0000001D  0012C P.AAR:  .LONG   29                                            ;
                                                  00000000' 00130         .ADDRESS P.AAS                                        ;
2A  2A  2A  2A  2A  20  70  6D  75  64  20  65  6C  69  66  00134 P.AAU:  .ASCII  \file dump *****************************\      ;
2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  00143                                                                ;
                        2A  2A  2A  2A  2A  2A  2A  2A  2A  00152                                                                ;
                                                            0015B         .BLKB   1
                                                  00000027  0015C P.AAT:  .LONG   39                                            ;
                                                  00000000' 00160         .ADDRESS P.AAU                                        ;
2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  00164 P.AAW:  .ASCII  \************************** End of\            ;
64  6E  45  20  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  00173                                                                ;
```

```
                                                 66  6F  20  00182                                                          ;
                                                             00185          .BLKB    3                                      ;
                                                   00000021  00188 P.AAV:   .LONG    33                                     ;
                                                   00000000' 0018C          .ADDRESS P.AAW                                  ;
2A  2A  2A  2A  2A  20  70  6D  75  64  20  65  6C  69  66  00190 P.AAY:   .ASCII   \file dump **************************\  ;
2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  2A  0019F                                                          ;
                                        2A  2A  2A  2A  2A  2A  001AE                                                          ;
                                                   00000024  001B4 P.AAX:   .LONG    36                                     ;
                                                   00000000' 001B8          .ADDRESS P.AAY                                  ;



                                                                            .PSECT   $CODE$,NOWRT,2

                                                       007C  00000          .ENTRY   NMLSFILEDMP, Save R2,R3,R4,R5,R6       ; 1025
                                  56 00000000G  00   9E  00002          MOVAB    LIB$PUT_OUTPUT, R6                     ;
                                  55 00000000V  00   9E  00009          MOVAB    NML$APPENDTXT, R5                      ;
                                  54 00000000G  00   9E  00010          MOVAB    NML$GL_LOGMASK, R4                     ;
                                  53 00000000'  00   9E  00017          MOVAB    P.AAT, R3                              ;
                                  5E       FD5C  CE   9E  0001E          MOVAB    -676(SP), SP                           ;
                    73            64         04  AC   E1  00023          BBC      BITNUM, NML$GL_LOGMASK, 3$             ; 1069
                         0C       AE       0100  8F   B0  00028          MOVW     #256, OUTDSC                           ; 1075
                         10       AE       FF00  CD   9E  0002E          MOVAB    FAOBUF, OUTDSC+4                       ; 1076
                                             0C  AE   9F  00034          PUSHAB   OUTDSC                                 ; 1082
                                             10  AE   9F  00037          PUSHAB   OUTDSC                                 ; 1078
                                                  53   DD  0003A          PUSHL    R3                                     ; 1080
                                             D0  A3   9F  0003C          PUSHAB   P.AAR                                  ; 1079
                                             08  AC   DD  0003F          PUSHL    FID                                    ; 1082
                                  65             05   FB  00042          CALLS    #5, NML$APPENDTXT                      ;
                                             0C  AE   9F  00045          PUSHAB   OUTDSC                                 ; 1084
                                  66             01   FB  00048          CALLS    #1, LIB$PUT_OUTPUT                     ;
      52            64            01             01   EF  0004B          EXTZV    #1, #1, NML$GL_LOGMASK, SAVEFLAG       ; 1089
                                  64             02   88  00050          BISB2    #2, NML$GL_LOGMASK                     ; 1090
                                                  6E   B4  00053          CLRW     KEY                                    ; 1094
                                             04  AE   9F  00055 1$:       PUSHAB   RECDSC                                 ; 1095
                                      00000000G  00   9F  00058          PUSHAB   NML$GQ_RECBFDSC                        ;
                                             08  AE   9F  0005E          PUSHAB   KEY                                    ;
                                             08  AC   DD  00061          PUSHL    FID                                    ;
                         00000000G  00             04   FB  00064          CALLS    #4, NMA$READREC                        ;
                                  04             50   E9  0006B          BLBC     R0, 2$                                 ;
                                                  6E   B6  0006E          INCW     KEY                                    ; 1098
                                                  E3   11  00070          BRB      1$                                     ; 1095
                         0C       AE       0100  8F   B0  00072 2$:       MOVW     #256, OUTDSC                           ; 1104
                         10       AE       FF00  CD   9E  00078          MOVAB    FAOBUF, OUTDSC+4                       ; 1105
                                             0C  AE   9F  0007E          PUSHAB   OUTDSC                                 ; 1111
                                             10  AE   9F  00081          PUSHAB   OUTDSC                                 ; 1107
                                             58  A3   9F  00084          PUSHAB   P.AAX                                  ; 1109
                                             2C  A3   9F  00087          PUSHAB   P.AAV                                  ; 1108
                                             08  AC   DD  0008A          PUSHL    FID                                    ; 1111
                                  65             05   FB  0008D          CALLS    #5, NML$APPENDTXT                      ;
                                             0C  AE   9F  00090          PUSHAB   OUTDSC                                 ; 1113
                                  66             01   FB  00093          CALLS    #1, LIB$PUT_OUTPUT                     ;
      64            01            01             52   F0  00096          INSV     SAVEFLAG, #1, #1, NML$GL_LOGMASK       ; 1117
                                                       04  0009B 3$:       RET                                             ; 1119

; Routine Size:  156 bytes,    Routine Base:  $CODE$ + 0535
```

```
; 1134      1120  1
; 1135      1121  1  %SBTTL 'NML$LOGFILEOP  Log a file operation'
; 1136      1122  1  GLOBAL ROUTINE NML$LOGFILEOP (BITNUM, FILEID, TXTDSC) : NOVALUE =
; 1137      1123  1
; 1138      1124  1  !++
; 1139      1125  1  ! FUNCTIONAL DESCRIPTION:
; 1140      1126  1  !
; 1141      1127  1  !       This routine logs file operations such as open and close.
; 1142      1128  1  !
; 1143      1129  1  ! FORMAL PARAMETERS:
; 1144      1130  1  !
; 1145      1131  1  !       BITNUM          Logging flag bit number.
; 1146      1132  1  !       FILEID          Value of the fileid parameter (NMA$C_OPN_xxxx)
; 1147      1133  1  !       TXTDSC          Descriptor of message text.
; 1148      1134  1  !
; 1149      1135  1  ! IMPLICIT INPUTS:
; 1150      1136  1  !
; 1151      1137  1  !       NONE
; 1152      1138  1  !
; 1153      1139  1  ! IMPLICIT OUTPUTS:
; 1154      1140  1  !
; 1155      1141  1  !       NONE
; 1156      1142  1  !
; 1157      1143  1  ! ROUTINE VALUE:
; 1158      1144  1  ! COMPLETION CODES:
; 1159      1145  1  !
; 1160      1146  1  !       NONE
; 1161      1147  1  !
; 1162      1148  1  ! SIDE EFFECTS:
; 1163      1149  1  !
; 1164      1150  1  !       NONE
; 1165      1151  1  !
; 1166      1152  1  !--
; 1167      1153  1
; 1168      1154  2     BEGIN
; 1169      1155  2
; 1170      1156  2     LOCAL
; 1171      1157  2         OUTBUF : VECTOR [255, BYTE],
; 1172      1158  2         OUTDSC : DESCRIPTOR;
; 1173      1159  2
; 1174      1160  2     OUTDSC [DSC$W_LENGTH] = 255;
; 1175      1161  2     OUTDSC [DSC$A_POINTER] = OUTBUF;
; 1176      1162  2
; 1177      1163  2     NML$APPENDTXT (.FILEID, 0, .TXTDSC, OUTDSC, OUTDSC [DSC$W_LENGTH]);
; 1178      1164  2
; 1179      1165  2     NML$DEBUG_TXT (.BITNUM,
; 1180      1166  2                    OUTDSC);
; 1181      1167  1     END;



                                  0000 00000          .ENTRY  NML$LOGFILEOP, Save nothing                  : 1122
                  5E      FEF8   CE   9E 00002          MOVAB   -264(SP), SP                                 :
                  6E        FF   8F   9B 00007          MOVZBW  #255, OUTDSC                                 : 1160
            04    AE        08   AE   9E 0000B          MOVAB   OUTBUF, OUTDSC+4                             : 1161
```

```
                                                           F  5
NML$BLDMSG      NML Network message builder module         15-Sep-1984 23:58:54     VAX-11 Bliss-32 V4.0-742                 Page  42
V04-000         NML$LOGFILEOP  Log a file operation        14-Sep-1984 12:50:03     [NML.SRC]NMLBLDMSG.B32;1                      (15)

                                               5E  DD 00010          PUSHL   SP                                        ; 1163
                                          04   AE  9F 00012          PUSHAB  OUTDSC                                    ;
                                          0C   AC  DD 00015          PUSHL   TXTDSC                                    ;
                                               7E  D4 00018          CLRL    -(SP)                                     ;
                                          08   AC  DD 0001A          PUSHL   FILEID                                    ;
                         00000000V  00         05  FB 0001D          CALLS   #5, NML$APPENDTXT                         ;
                                               5E  DD 00024          PUSHL   SP                                        ; 1165
                                          04   AC  DD 00026          PUSHL   BITNUM                                    ;
                              FC2E   CF        02  FB 00029          CALLS   #2, NML$DEBUG_TXT                         ;
                                                   04 0002E          RET                                               ; 1167

; Routine Size:  47 bytes,    Routine Base:  $CODE$ + 05D1
```

```
1 %SBTTL 'NML$LOGRECORDOP  Log a record access operation'
1 GLOBAL ROUTINE NML$LOGRECORDOP (BITNUM, FILEID, TXTDSC, DATDSC) : NOVALUE =
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !       This routine logs record access operations such as read, write,
1 !       and delete.
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !       BITNUM          Logging flag bit number.
1 !       FILEID          Value of the fileid parameter (NMA$C_OPN_xxxx).
1 !       TXTDSC          Descriptor of message text.
1 !       DATDSC          Descriptor of record data.
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !       NONE
1 !
1 ! IMPLICIT OUTPUTS:
1 !
1 !       NONE
1 !
1 ! ROUTINE VALUE:
1 ! COMPLETION CODES:
1 !
1 !       NONE
1 !
1 ! SIDE EFFECTS:
1 !
1 !       NONE
1 !
1 !--
1
2    BEGIN
2
2    MAP
2       DATDSC : REF DESCRIPTOR;
2
2    LOCAL
2       OUTBUF : VECTOR [255, BYTE],
2       OUTDSC : DESCRIPTOR;
2 !
2 ! Initialize output buffer descriptor.
2 !
2    OUTDSC [DSC$W_LENGTH] = 255;
2    OUTDSC [DSC$A_POINTER] = OUTBUF;
2 !
2 ! Append the file type to the message text.
2 !
2    NML$APPENDTXT (.FILEID, 0, .TXTDSC, OUTDSC, OUTDSC [DSC$W_LENGTH]);
2 !
2 ! Log the data.
2 !
2    NML$DEBUG_MSG (.BITNUM,
2                   .DATDSC [DSC$A_POINTER],
; 1240          1225  2                      .DATDSC [DSC$W_LENGTH],
; 1241          1226  2                      OUTDSC);
; 1242          1227  2
; 1243          1228  1         END;



                                                  0000 00000          .ENTRY  NML$LOGRECORDOP, Save nothing                  ; 1169
                       5E    FEF8      CE   9E 00002          MOVAB   -264(SP), SP
                       6E      FF      8F   9B 00007          MOVZBW  #255, OUTDSC                                   ; 1214
             04        AE      08      AE   9E 0000B          MOVAB   OUTBUF, OUTDSC+4                               ; 1215
                                       5E   DD 00010          PUSHL   SP                                             ; 1219
                               04      AE   9F 00012          PUSHAB  OUTDSC                                         ;
                               0C      AC   DD 00015          PUSHL   TXTDSC                                         ;
                                       7E   D4 00018          CLRL    -(SP)                                          ;
                               08      AC   DD 0001A          PUSHL   FILEID                                         ;
      00000000V        00              05   FB 0001D          CALLS   #5, NML$APPENDTXT                              ;
                                       5E   DD 00024          PUSHL   SP                                             ; 1223
                       50      10      AC   D0 00026          MOVL    DATDSC, R0                                     ; 1225
                       7E              60   3C 0002A          MOVZWL  (R0), -(SP)                                    ;
                               04      A0   DD 0002D          PUSHL   4(R0)                                          ; 1224
                               04      AC   DD 00030          PUSHL   BITNUM                                         ; 1223
                 FC33  CF              04   FB 00033          CALLS   #4, NML$DEBUG_MSG                              ;
                                            04 00038          RET                                                    ; 1228

; Routine Size:  57 bytes,    Routine Base:  $CODE$ + 0600
; 1245          1229  1 %SBTTL 'NML$APPENDTXT  Append file type to string'
; 1246          1230  1 GLOBAL ROUTINE NML$APPENDTXT (FILEID, PFXDSC, SFXDSC, OUTDSC, RESLEN) : NOVALUE =
; 1247          1231  1
; 1248          1232  1 !++
; 1249          1233  1 ! FUNCTIONAL DESCRIPTION:
; 1250          1234  1 !
; 1251          1235  1 !       This routine appends the file type string to the beginning of a
; 1252          1236  1 !       text string.
; 1253          1237  1 !
; 1254          1238  1 ! FORMAL PARAMETERS:
; 1255          1239  1 !
; 1256          1240  1 !       FILEID          Value of the fileid parameter (NMA$C_OPN_xxxx)
; 1257          1241  1 !       PFXDSC          Descriptor of prefix text.
; 1258          1242  1 !       SFXDSC          Descriptor of suffix text.
; 1259          1243  1 !       OUTDSC          Descriptor of output string buffer.
; 1260          1244  1 !       RESLEN          Length of resulting appended string.
; 1261          1245  1 !
; 1262          1246  1 ! IMPLICIT INPUTS:
; 1263          1247  1 !
; 1264          1248  1 !       NONE
; 1265          1249  1 !
; 1266          1250  1 ! IMPLICIT OUTPUTS:
; 1267          1251  1 !
; 1268          1252  1 !       NONE
; 1269          1253  1 !
; 1270          1254  1 ! ROUTINE VALUE:
; 1271          1255  1 ! COMPLETION CODES:
; 1272          1256  1 !
; 1273          1257  1 !       NONE
; 1274          1258  1 !
; 1275          1259  1 ! SIDE EFFECTS:
; 1276          1260  1 !
; 1277          1261  1 !       NONE
; 1278          1262  1 !
; 1279          1263  1 !--
; 1280          1264  1
; 1281          1265  2     BEGIN
; 1282          1266  2
; 1283          1267  2     MAP
; 1284          1268  2         PFXDSC : REF DESCRIPTOR,
; 1285          1269  2         SFXDSC : REF DESCRIPTOR,
; 1286          1270  2         OUTDSC : REF DESCRIPTOR;
; 1287          1271  2
; 1288          1272  2     LOCAL
; 1289          1273  2         CTLDSC : REF DESCRIPTOR,
; 1290          1274  2         FAOLST : VECTOR [6],
; 1291          1275  2         IDX,
; 1292          1276  2         TYPDSC : REF DESCRIPTOR;
; 1293          1277  2 !
; 1294          1278  2 ! Select file type string.
; 1295          1279  2 !
; 1296          1280  2     CASE .FILEID FROM NMA$C_OPN_MIN TO NMA$C_OPN_MAX OF
; 1297          1281  2         SET
; 1298          1282  2         [NMA$C_OPN_NODE]:
; 1299          1283  2             TYPDSC = $ASCID ('Node');
; 1300          1284  2         [NMA$C_OPN_LINE]:
; 1301          1285  2             TYPDSC = $ASCID ('Line');
; 1302            1286 2            [NMA$C_OPN_LOG]:
; 1303            1287 2                 TYPDSC = $ASCID ('Logging');
; 1304            1288 2            [NMA$C_OPN_OBJ]:
; 1305            1289 2                 TYPDSC = $ASCID ('Object');
; 1306            1290 2            [NMA$C_OPN_CIR]:
; 1307            1291 2                 TYPDSC = $ASCID ('Circuit');
; 1308            1292 2            [NMA$C_OPN_X25]:
; 1309            1293 2                 TYPDSC = $ASCID ('X25 Module');
; 1310            1294 2            [NMA$C_OPN_X29]:
; 1311            1295 2                 TYPDSC = $ASCID ('X29 Module');
; 1312            1296 2            [NMA$C_OPN_CNF]:
; 1313            1297 2                 TYPDSC = $ASCID ('Configurator Module');
; 1314            1298 2            [INRANGE,
; 1315            1299 2             OUTRANGE]:
; 1316            1300 2                 TYPDSC = $ASCID ('Unknown');
; 1317            1301 2            TES;
; 1318            1302 2   !
; 1319            1303 2   ! Set up FAO parameters.
; 1320            1304 2   !
; 1321            1305 2       IDX = 0;
; 1322            1306 2
; 1323            1307 2       IF .PFXDSC NEQA 0
; 1324            1308 2       THEN
; 1325            1309 3            BEGIN
; 1326            1310 3
; 1327            1311 3            FAOLST [0] = .PFXDSC [DSC$W_LENGTH];
; 1328            1312 3            FAOLST [1] = .PFXDSC [DSC$A_POINTER];
; 1329            1313 3            IDX = 2;
; 1330            1314 3
; 1331            1315 2            END;
; 1332            1316 2
; 1333            1317 2       FAOLST [.IDX] = .TYPDSC [DSC$W_LENGTH];
; 1334            1318 2       FAOLST [.IDX + 1] = .TYPDSC [DSC$A_POINTER];
; 1335            1319 2       IDX = .IDX + 2;
; 1336            1320 2
; 1337            1321 2       IF .SFXDSC NEQA 0
; 1338            1322 2       THEN
; 1339            1323 3            BEGIN
; 1340            1324 3
; 1341            1325 3            FAOLST [.IDX] = .SFXDSC [DSC$W_LENGTH];
; 1342            1326 3            FAOLST [.IDX + 1] = .SFXDSC [DSC$A_POINTER];
; 1343            1327 3            IDX = .IDX + 2;
; 1344            1328 3
; 1345            1329 2            END;
; 1346            1330 2
; 1347            1331 2       IF .IDX GTR 4
; 1348            1332 2       THEN
; 1349            1333 3            CTLDSC = $ASCID ('!AD !AD !AD')
; 1350            1334 2       ELSE
; 1351            1335 2            CTLDSC = $ASCID ('!AD !AD');
; 1352            1336 2   !
; 1353            1337 2   ! Append the name to the beginning of the text string.
; 1354            1338 2   !
; 1355          P 1339 2       $FAOL (CTRSTR = .CTLDSC,
; 1356          P 1340 2              OUTLEN = .RESLEN,
; 1357          P 1341 2              OUTBUF = .OUTDSC,
; 1358            1342 2              PRMLST = FAOLST);
; 1359          1343  2
; 1360          1344  1      END;



                                                                           .PSECT  $PLIT$,NOWRT,NOEXE,2

                                          65  64  6F  4E  001BC P.ABA:     .ASCII  \Node\                                      ;
                                               00000004   001C0 P.AAZ:     .LONG   4                                           ;
                                               00000000'  001C4            .ADDRESS P.ABA                                      ;
                                          65  6E  69  4C  001C8 P.ABC:     .ASCII  \Line\                                      ;
                                               00000004   001CC P.ABB:     .LONG   4                                           ;
                                               00000000'  001D0            .ADDRESS P.ABC                                      ;
                              67  6E  69  67  67  6F  4C  001D4 P.ABE:     .ASCII  \Logging\                                   ;
                                                          001DB            .BLKB   1
                                               00000007   001DC P.ABD:     .LONG   7                                           ;
                                               00000000'  001E0            .ADDRESS P.ABE                                      ;
                                  74  63  65  6A  62  4F  001E4 P.ABG:     .ASCII  \Object\                                    ;
                                                          001EA            .BLKB   2
                                               00000006   001EC P.ABF:     .LONG   6                                           ;
                                               00000000'  001F0            .ADDRESS P.ABG                                      ;
                              74  69  75  63  72  69  43  001F4 P.ABI:     .ASCII  \Circuit\                                   ;
                                                          001FB            .BLKB   1
                                               00000007   001FC P.ABH:     .LONG   7                                           ;
                                               00000000'  00200            .ADDRESS P.ABI                                      ;
              65  6C  75  64  6F  4D  20  35  32  58  00204 P.ABK:     .ASCII  \X25 Module\                                ;
                                                          0020E            .BLKB   2
                                               0000000A   00210 P.ABJ:     .LONG   10                                          ;
                                               00000000'  00214            .ADDRESS P.ABK                                      ;
              65  6C  75  64  6F  4D  20  39  32  58  00218 P.ABM:     .ASCII  \X29 Module\                                ;
                                                          00222            .BLKB   2
                                               0000000A   00224 P.ABL:     .LONG   10                                          ;
                                               00000000'  00228            .ADDRESS P.ABM                                      ;
6F  4D  20  72  6F  74  61  72  75  67  69  66  6E  6F  43  0022C P.ABO:     .ASCII  \Configurator Module\                       ;
                                          65  6C  75  64  0023B                                                                ;
                                                          0023F            .BLKB   1
                                               00000013   00240 P.ABN:     .LONG   19                                          ;
                                               00000000'  00244            .ADDRESS P.ABO                                      ;
                              6E  77  6F  6E  6B  6E  55  00248 P.ABQ:     .ASCII  \Unknown\                                   ;
                                                          0024F            .BLKB   1
                                               00000007   00250 P.ABP:     .LONG   7                                           ;
                                               00000000'  00254            .ADDRESS P.ABQ                                      ;
          44  41  21  20  44  41  21  20  44  41  21  00258 P.ABS:     .ASCII  \!AD !AD !AD\                               ;
                                                          00263            .BLKB   1
                                               0000000B   00264 P.ABR:     .LONG   11                                          ;
                                               00000000'  00268            .ADDRESS P.ABS                                      ;
                              44  41  21  20  44  41  21  0026C P.ABU:     .ASCII  \!AD !AD\                                   ;
                                                          00273            .BLKB   1
                                               00000007   00274 P.ABT:     .LONG   7                                           ;
                                               00000000'  00278            .ADDRESS P.ABU                                      ;



                                                                           .PSECT  $CODE$,NOWRT,2

                                                    000C  00000            .ENTRY  NML$APPENDTXT, Save R2,R3                   ; 1230
                                  53 00000000'  00  9E  00002            MOVAB   P.ABP, R3                                     ;
```

```
                                       5E             18  C2 00009          SUBL2   #24, SP                              ;
                             07        00       04    AC  CF 0000C          CASEL   FILEID, #0, #7                       ; 1280
          0029             0023      001C           0015     00011 1$:      .WORD   2$-1$,-                              ;
          0041             003B      0035           002F     00019                  3$-1$,-                              ;
                                                                                    4$-1$,-                              ;
                                                                                    5$-1$,-                              ;
                                                                                    6$-1$,-                              ;
                                                                                    7$-1$,-                              ;
                                                                                    8$-1$,-                              ;
                                                                                    9$-1$                                ;
                                       52             63  9E 00021          MOVAB   P.ABP, TYPDSC                        ; 1300
                                                      30  11 00024          BRB     10$                                  ;
                                       52     FF70    C3  9E 00026 2$:      MOVAB   P.AAZ, TYPDSC                        ; 1283
                                                      29  11 0002B          BRB     10$                                  ;
                                       52     FF7C    C3  9E 0002D 3$:      MOVAB   P.ABB, TYPDSC                        ; 1285
                                                      22  11 00032          BRB     10$                                  ;
                                       52       8C    A3  9E 00034 4$:      MOVAB   P.ABD, TYPDSC                        ; 1287
                                                      1C  11 00038          BRB     10$                                  ;
                                       52       9C    A3  9E 0003A 5$:      MOVAB   P.ABF, TYPDSC                        ; 1289
                                                      16  11 0003E          BRB     10$                                  ;
                                       52       AC    A3  9E 00040 6$:      MOVAB   P.ABH, TYPDSC                        ; 1291
                                                      10  11 00044          BRB     10$                                  ;
                                       52       C0    A3  9E 00046 7$:      MOVAB   P.ABJ, TYPDSC                        ; 1293
                                                      0A  11 0004A          BRB     10$                                  ;
                                       52       D4    A3  9E 0004C 8$:      MOVAB   P.ABL, TYPDSC                        ; 1295
                                                      04  11 00050          BRB     10$                                  ;
                                       52       F0    A3  9E 00052 9$:      MOVAB   P.ABN, TYPDSC                        ; 1297
                                                      50  D4 00056 10$:     CLRL    IDX                                  ; 1305
                                       51       08    AC  D0 00058          MOVL    PFXDSC, R1                           ; 1307
                                                      0B  13 0005C          BEQL    11$                                  ;
                                       6E             61  3C 0005E          MOVZWL  (R1), FAOLST                         ; 1311
                                 04    AE       04    A1  D0 00061          MOVL    4(R1), FAOLST+4                      ; 1312
                                       50             02  D0 00066          MOVL    #2, IDX                              ; 1313
                                     6E40             62  3C 00069 11$:     MOVZWL  (TYPDSC), FAOLST[IDX]                ; 1317
                                 04  AE40       04    A2  D0 0006D          MOVL    4(TYPDSC), FAOLST+4[IDX]             ; 1318
                                       50             02  C0 00073          ADDL2   #2, IDX                              ; 1319
                                       51       0C    AC  D0 00076          MOVL    SFXDSC, R1                           ; 1321
                                                      0D  13 0007A          BEQL    12$                                  ;
                                     6E40             61  3C 0007C          MOVZWL  (R1), FAOLST[IDX]                    ; 1325
                                 04  AE40       04    A1  D0 00080          MOVL    4(R1), FAOLST+4[IDX]                 ; 1326
                                       50             02  C0 00086          ADDL2   #2, IDX                              ; 1327
                                       04             50  D1 00089 12$:     CMPL    IDX, #4                              ; 1331
                                                      06  15 0008C          BLEQ    13$                                  ;
                                       50       14    A3  9E 0008E          MOVAB   P.ABR, CTLDSC                        ; 1333
                                                      04  11 00092          BRB     14$                                  ;
                                       50       24    A3  9E 00094 13$:     MOVAB   P.ABT, CTLDSC                        ; 1335
                                                      5E  DD 00098 14$:     PUSHL   SP                                   ; 1342
                                                10    AC  DD 0009A          PUSHL   OUTDSC                               ;
                                                14    AC  DD 0009D          PUSHL   RESLEN                               ;
                                                      50  DD 000A0          PUSHL   CTLDSC                               ;
                           00000000G   00             04  FB 000A2          CALLS   #4, SYS$FAOL                         ;
                                                          04 000A9          RET                                          ; 1344

; Routine Size:  170 bytes,    Routine Base:  $CODE$ + 0639
; 1362          1345  1 %SBTTL 'NML$TRNLOGNUM  Translate numeric logical name'
; 1363          1346  1 GLOBAL ROUTINE NML$TRNLOGNUM (LNMDSC, RESADR) =
; 1364          1347  1
; 1365          1348  1 !++
; 1366          1349  1 ! FUNCTIONAL DESCRIPTION:
; 1367          1350  1 !
; 1368          1351  1 !       This routine translates a logical name and returns the numeric
; 1369          1352  1 !       representation of the ASCII hexadecimal number that results.
; 1370          1353  1 !
; 1371          1354  1 ! FORMAL PARAMETERS:
; 1372          1355  1 !
; 1373          1356  1 !       LNMDSC          Descriptor of the logical name to be translated.
; 1374          1357  1 !       RESADR          Address of longword to contain the numeric value.
; 1375          1358  1 !
; 1376          1359  1 ! IMPLICIT INPUTS:
; 1377          1360  1 !
; 1378          1361  1 !       NONE
; 1379          1362  1 !
; 1380          1363  1 ! IMPLICIT OUTPUTS:
; 1381          1364  1 !
; 1382          1365  1 !       NONE
; 1383          1366  1 !
; 1384          1367  1 ! ROUTINE VALUE:
; 1385          1368  1 ! COMPLETION CODES:
; 1386          1369  1 !
; 1387          1370  1 !       Returns error code if the logical name has no translation or the
; 1388          1371  1 !       translation is invalid.  The result longword will be set to zero.
; 1389          1372  1 !
; 1390          1373  1 ! SIDE EFFECTS:
; 1391          1374  1 !
; 1392          1375  1 !       NONE
; 1393          1376  1 !
; 1394          1377  1 !--
; 1395          1378  1
; 1396          1379  2     BEGIN
; 1397          1380  2
; 1398          1381  2     MAP
; 1399          1382  2         LNMDSC : DESCRIPTOR;
; 1400          1383  2
; 1401          1384  2     OWN
; 1402          1385  2         ASCLEN : WORD,
; 1403          1386  2         ASCNUM : VECTOR [8, BYTE];
; 1404          1387  2
; 1405          1388  2     LOCAL
; 1406          1389  2         STATUS;
; 1407          1390  2
; 1408        P 1391  2     STATUS = $TRNLNM (ATTR = UPLIT (LNM$M_CASE_BLIND),
; 1409        P 1392  2                     TABNAM = %ASCID 'LNM$PROCESS_TABLE',
; 1410        P 1393  2                     LOGNAM = .LNMDSC,
; 1411        P 1394  2                     ITMLST = UPLIT (WORD (8), WORD (LNM$_STRING),
; 1412        P 1395  2                                     LONG (ASCNUM),
; 1413        P 1396  2                                     LONG (ASCLEN),
; 1414        P 1397  2                                     LONG (0))
; 1415          1398  2                     );
; 1416          1399  2
; 1417          1400  2     IF .STATUS EQL SS$_NORMAL
; 1418          1401  2     THEN
; 1419          1402  2             STATUS = LIB$CVT_HTB (.ASCLEN, ASCNUM, .RESADR);
; 1420          1403  2
; 1421          1404  2         RETURN .STATUS
; 1422          1405  2
; 1423          1406  1         END;                                                    ! End of NML$TRNLOGNUM


                                                                  .PSECT  $PLIT$,NOWRT,NOEXE,2

                                              02000000  0027C P.ABV:   .LONG   33554432                                     ;
42 41 54 5F 53 53 45 43 4F 52 50 24 4D 4E 4C  00280 P.ABX:   .ASCII  \LNM$PROCESS_TABLE\<0><0><0>                 ;
                              00 00 00 45 4C  0028F                                                                 ;
                                              010E0011  00294 P.ABW:   .LONG   17694737                                     ;
                                              00000000' 00298          .ADDRESS P.ABX                                       ;
                                                  0008  0029C P.ABY:   .WORD   8                                            ;
                                                  0002  0029E          .WORD   2                                            ;
                                              00000000' 002A0          .ADDRESS ASCNUM                                      ;
                                              00000000' 002A4          .ADDRESS ASCLEN                                      ;
                                              00000000  002A8          .LONG   0                                            ;

                                                                  .PSECT  $OWN$,NOEXE,2

                                                        00120 ASCLEN:  .BLKB   2
                                                        00122          .BLKB   2
                                                        00124 ASCNUM:  .BLKB   8

                                                                  .EXTRN  SYS$TRNLNM

                                                                  .PSECT  $CODE$,NOWRT,2

                                                  0004  00000          .ENTRY  NML$TRNLOGNUM, Save R2                     ; 1346
                           52 00000000'   00    9E  00002          MOVAB   P.ABY, R2                                  ;
                                          52    DD  00009          PUSHL   R2                                         ; 1398
                                          7E    D4  0000B          CLRL    -(SP)                                      ;
                                    04    AC    DD  0000D          PUSHL   LNMDSC                                     ;
                                    F8    A2    9F  00010          PUSHAB  P.ABW                                      ;
                                    E0    A2    9F  00013          PUSHAB  P.ABV                                      ;
                  00000000G   00          05    FB  00016          CALLS   #5, SYS$TRNLNM                             ;
                              01          50    D1  0001D          CMPL    STATUS, #1                                 ; 1400
                                          17    12  00020          BNEQ    1$                                         ;
                                    08    AC    DD  00022          PUSHL   RESADR                                     ; 1402
                              00000000'   00    9F  00025          PUSHAB  ASCNUM                                     ;
                           7E 00000000'   00    3C  0002B          MOVZWL  ASCLEN, -(SP)                              ;
                  00000000G   00          03    FB  00032          CALLS   #3, LIB$CVT_HTB                            ;
                                                04  00039 1$:      RET                                                ; 1406

; Routine Size:  58 bytes,    Routine Base:  $CODE$ + 06E3


; 1424          1407  1
; 1426          1408  1 END                                                    ! End of module
; 1427          1409  1
; 1428          1410  0 ELUDOM



                                                                 .EXTRN  LIB$SIGNAL

;                                     PSECT SUMMARY
;
;       Name                       Bytes                      Attributes
;
;   $CODE$                             1821  NOVEC,NOWRT,  RD  , EXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;   $OWN$                               300  NOVEC,  WRT,  RD  ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;   $PLIT$                              684  NOVEC,NOWRT,  RD  ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)



;                              Library Statistics
;
;                                          -------- Symbols --------        Pages       Processing
;       File                               Total    Loaded   Percent       Mapped      Time
;
;    _$255$DUA28:[NML.OBJ]NMLLIB.L32;1        341       48        14           27       00:00.1
;    _$255$DUA28:[SHRLIB]NMALIBRY.L32;1       887       15         1           47       00:00.2
;    _$255$DUA28:[SYSLIB]STARLET.L32;1       9776       16         0          581       00:02.1



;                                     COMMAND QUALIFIERS

;       BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS$:NMLBLDMSG/OBJ=OBJ$:NMLBLDMSG MSRC$:NMLBLDMSG/UPDATE=(ENH$:NMLBLDMSG)

; 1429          1411  0
; Size:         1821 code + 984 data bytes
; Run Time:        00:37.4
; Elapsed Time:    01:27.0
; Lines/CPU Min:     2261
; Lexemes/CPU-Min: 19199
; Memory Used:  157 pages
; Compilation Complete
```

0281 AH-BT13A-SE
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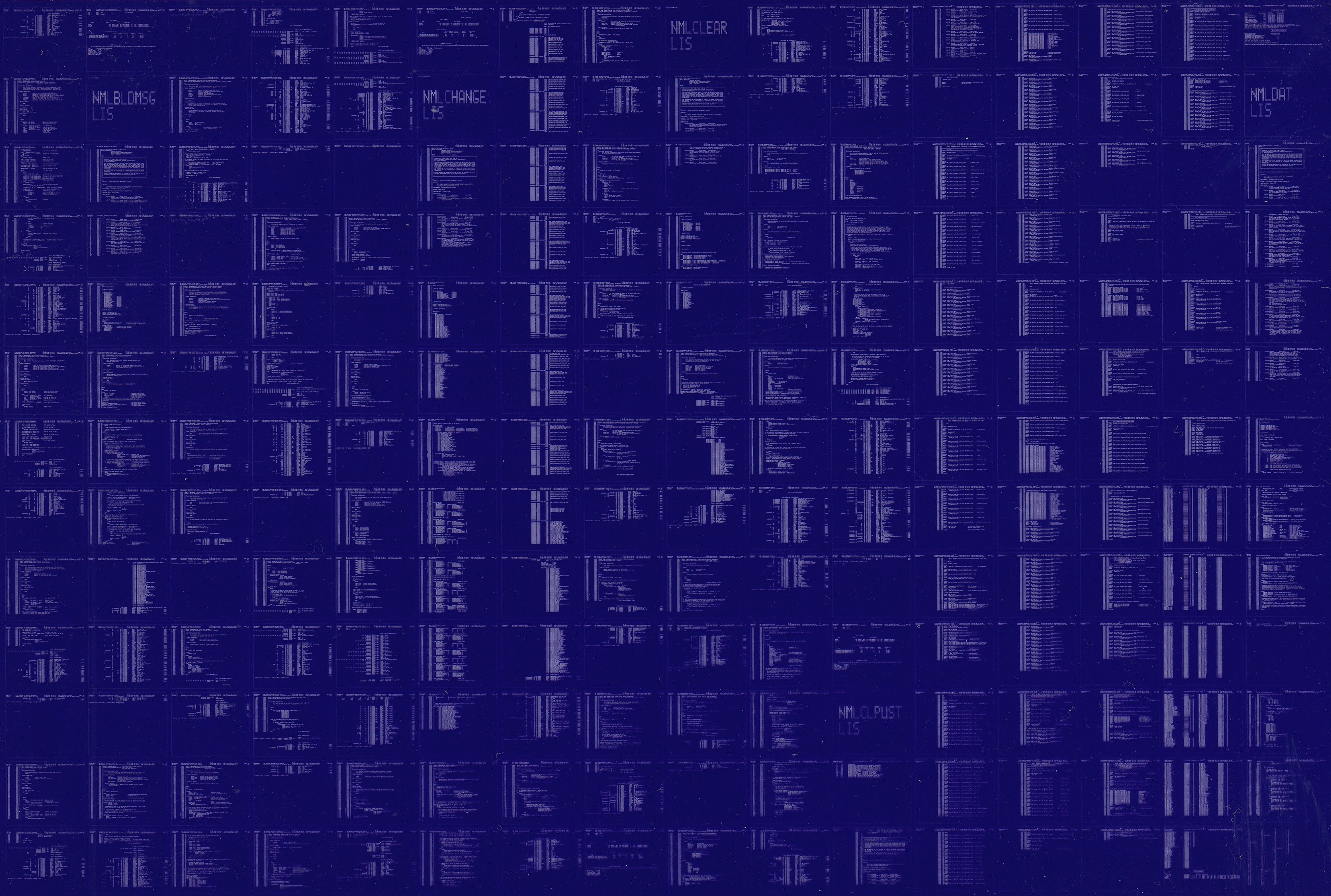

NMLCLEAR
LIS

NMLBLDMSG
LIS

NMLCHANGE
LIS

NMLDAT
LIS

NMLCLPUST
LIS